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MMDT4413

COMPLEMENTARY NPN/PNP SMALL SIGNAL SURGACE MOUNT TRANSISTOR

VOLTAGE 40 Volts **POWER** 225 mWatts

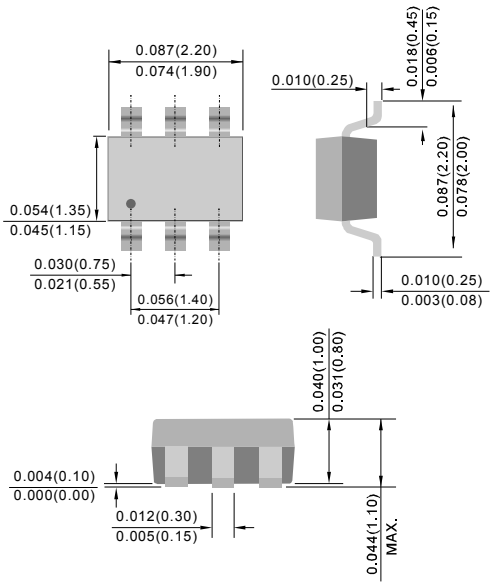
FEATURES

- Complementary Pair
- One 4401-Type NPN
- One 4403-Type PNP
- Epitaxial Planar Die Construction
- Ideal for Low Power Amplification and Switching
- Ultra-Small Surface Mount Package
- Also Available in Lead Free Version
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

MECHANICAL DATA

- Case: SOT-363, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.006 gram
- Marking: M6A

SOT-363 Unit: inch (mm)



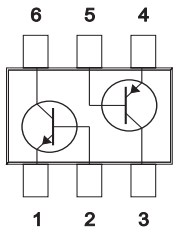


Fig.55

MAXIMUM RATINGS,TOTAL DEVICE@T_A=25°C UNLESS OTHERWISE SPECIFIED

Characteristic	Symbol	Value	Unit
Power Dissipation	Pd	225	mW
Thermal Resistance , Junction to Ambient	$R\theta_{JA}$	625	K/W
Operating and Storage and Junction Range	T_J,T_{STG}	-55 to 150	°C

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MAXIMUM RATINGS,NPN 4401 SECTION@T_A=25°C UNLESS OTHERWISE SPECIFIED

Characteristic	Symbol	NPN4401	Unit
Collector-Base Voltage	V_{CBO}	60	V
Collector-Emitter Voltage	V_{CEO}	40	V
Emitter-Base Volage	V_{EBO}	6.0	V
Collector Current-Continuous	I c	600	mA

MAXIMUM RATINGS,NPN 4403 SECTION@T_A=25°C UNLESS OTHERWISE SPECIFIED

Characteristic	Symbol	PNP4403	Unit
Collector-Base Voltage	V_{CBO}	-40	V
Collector-Emitter Voltage	V_{CEO}	-40	V
Emitter-Base Volage	V_{EBO}	-5.0	V
Collector Current-Continuous	I c	-600	mA

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ELECTRICAL CHARACTERISTICS,NPN 4401 SECTION@TA=25°C UNLESS OTHERWISE SPECIFIED

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
OFF CHARACTERISTIC					
Collector - Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=100μA, I_E=0	60	-	V
Collector - Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=1.0mA, I_B=0	40	-	V
Emitter - Base Breakdown Voltage	$V_{(BR)EBO}$	I_E=100μA, I_C=0	6.0	-	V
Collector Cutoff Current	I_{CEX}	V_{CE}=35V, $V_{EB(OFF)}$=0.4V	-	100	nA
Base Cutoff Current	I_{BL}	V_{CE}=35V, $V_{EB(OFF)}$=0.4V	-	100	nA
ON CHARACTERISTICS					
DC Current Gain (Note 2)	h_{FE}	I_C=100μA, V_{CE}=1.0V I_C=1.0mA, V_{CE}=1.0V I_C=10mA, V_{CE}=1.0V I_C=150mA, V_{CE}=1.0V I_C=500mA, V_{CE}=2.0V	20 40 80 100 40	- - - 300 -	-
Collector - Emitter Saturation Voltage	$V_{CE(SAT)}$	I_C=150mA, I_B=15mA I_C=500mA, I_B=50mA	-	0.40 0.75	V
Base - Emitter Saturation Voltage	$V_{BE(SAT)}$	I_C=150mA, I_B=15mA I_C=500mA, I_B=50mA	0.75 -	0.95 1.20	V
SMALL SIGNAL CHARACTERISTICS					
Output Capacitance	Ccb	V_{CB}=5V, I_E=0, f=1.0MHz	-	6.5	pF
Input Capacitance	Ceb	V_{EB}=0.5V, I_C=0, f=1MHz	-	30	pF
Input Impedance	hie	V_{CE}=10V, I_C=1.0mA, f=1.0KHz	1.0	15	kΩ
Voltage Feedback Ratio	hre		0.1	8.0	X 10^{-4}
Small Signal Current Gain	hfe		40	500	-
Output Admittance	hoe		1.0	30	μS
Current Gain - Bandwidth Product	f_T	V_{CE}=10V, I_C=20mA, f=100MHz	250	-	MHz
SWITCHING CHARACTERISTICS					
Delay Time	td	V_{CC}=30V,$V_{BE(OFF)}$=2.0V, I_C=150mA,I_{B1}=15mA	-	15	ns
Rise Time	tr		-	20	ns
Storage Time	ts	V_{CC}=30V,I_C=150mA I_{B1}=I_{B2}=15mA	-	225	ns
Fall Time	tf		-	30	ns

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ELECTRICAL CHARACTERISTICS,NPN 4403 SECTION@TA=25°C UNLESS OTHERWISE SPECIFIED

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
OFF CHARACTERISTIC					
Collector - Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=-100μA, I_E=0	-40	-	V
Collector - Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=-1.0mA, I_B=0	-40	-	V
Emitter - Base Breakdown Voltage	$V_{(BR)EBO}$	I_E=-100μA, I_C=0	-5.0	-	V
Collector Cutoff Current	I_{CEX}	V_{CE}=-35V, $V_{EB(OFF)}$=-0.4V	-	-100	nA
Base Cutoff Current	I_{BL}	V_{CE}=-35V, $V_{EB(OFF)}$=-0.4V	-	-100	nA
ON CHARACTERISTICS					
DC Current Gain (Note 2)	h_{FE}	I_C=-100μA, V_{CE}=-1.0V I_C=-1.0mA, V_{CE}=-1.0V I_C=-10mA, V_{CE}=-1.0V I_C=-150mA, V_{CE}=-2.0V I_C=-500mA, V_{CE}=-2.0V	30 60 100 100 20	- - - 300 -	-
Collector - Emitter Saturation Voltage	$V_{CE(SAT)}$	I_C=-150mA, I_B=-15mA I_C=-500mA, I_B=-50mA	-	-0.40 -0.75	V
Base - Emitter Saturation Voltage	$V_{BE(SAT)}$	I_C=-150mA, I_B=-15mA I_C=-500mA, I_B=-50mA	-0.75 -	-0.95 -1.30	V
SMALL SIGNAL CHARACTERISTICS					
Output Capacitance	Ccb	V_{CB}=-10V, I_E=0, f=1.0MHz	-	8.5	pF
Input Capacitance	Ceb	V_{EB}=-0.5V, I_C=0, f=1MHz	-	30	pF
Input Impedance	hie	V_{CE}=-10V, I_C=-1.0mA, f=1.0KHz	1.5	15	kΩ
Voltage Feedback Ratio	hre		0.1	8.0	X 10^{-4}
Small Signal Current Gain	hfe		60	500	-
Output Admittance	hoe		1.0	100	μS
Current Gain - Bandwidth Product	f_T	V_{CE}=-10V, I_C=-20mA, f=100MHz	200	-	MHz
SWITCHING CHARACTERISTICS					
Delay Time	td	V_{CC}=-30V,$V_{BE(OFF)}$=-2.0V, I_C=-150mA,I_{B1}=-15mA	-	15	ns
Rise Time	tr		-	20	ns
Storage Time	ts	V_{CC}=-30V,I_C=-150mA I_{B1}=I_{B2}=-15mA	-	225	ns
Fall Time	tf		-	30	ns

MMDT4413

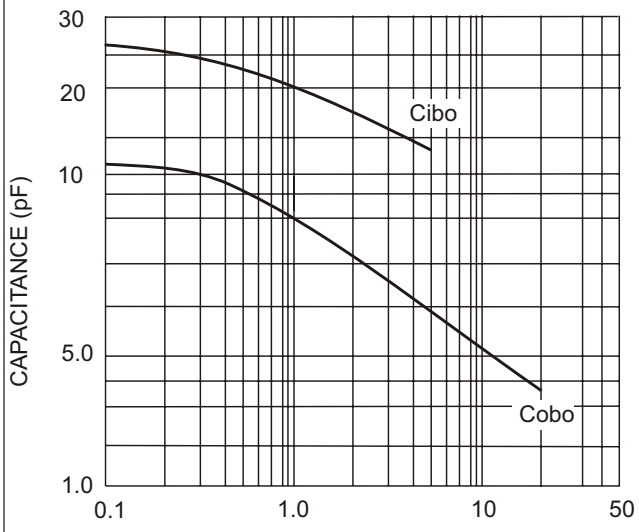

Fig. 1 Typical Capacitance (4401)

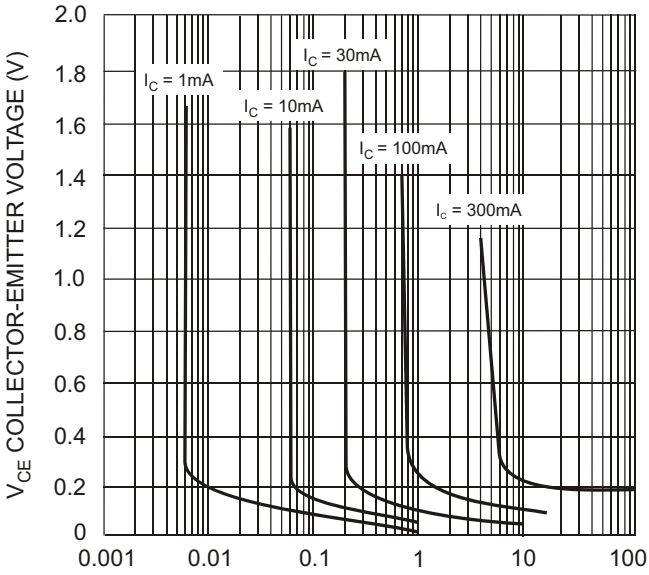

Fig. 2 Typical Collector Saturation Region (4401)

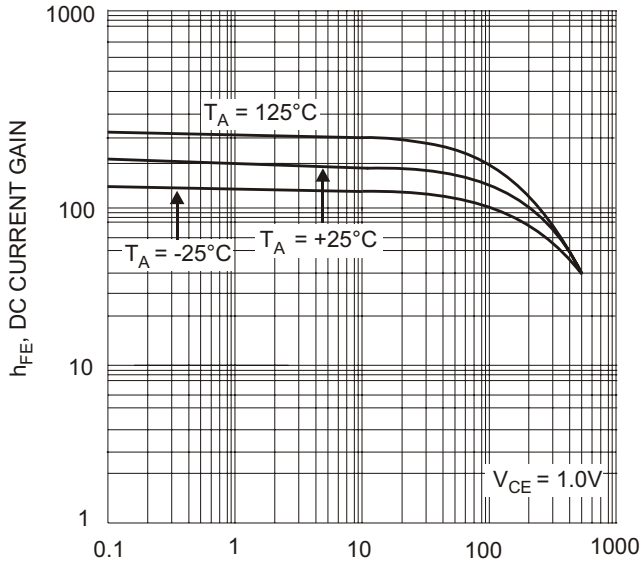

Fig. 3 Typical DC Current Gain vs Collector Current (4401)

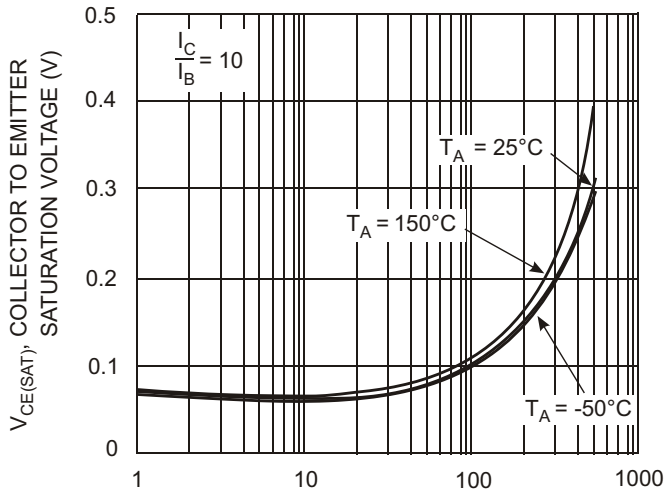

Fig. 4 Collector Emitter Saturation Voltage vs. Collector Current (4401)

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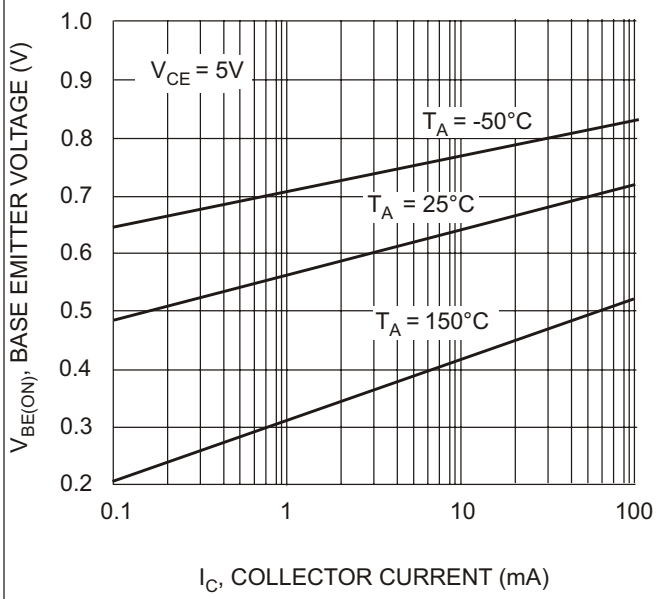

Fig. 5 Base Emitter Voltage vs. Collector Current (4401)

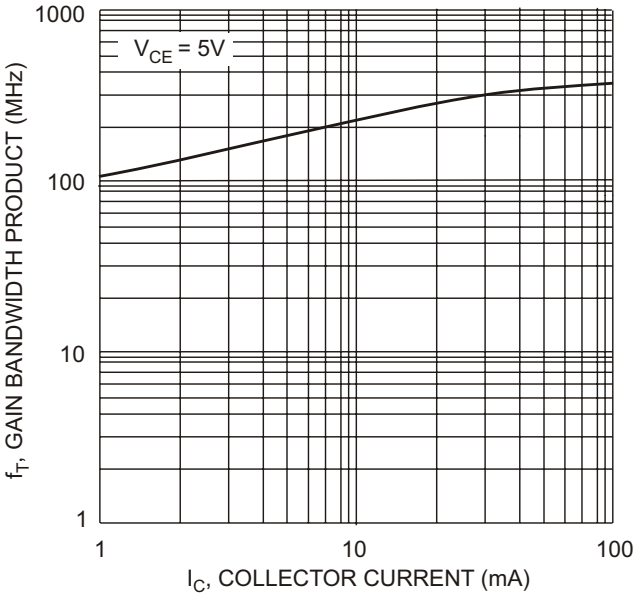

Fig. 6 Gain Bandwidth Product vs. Collector Current (4401)

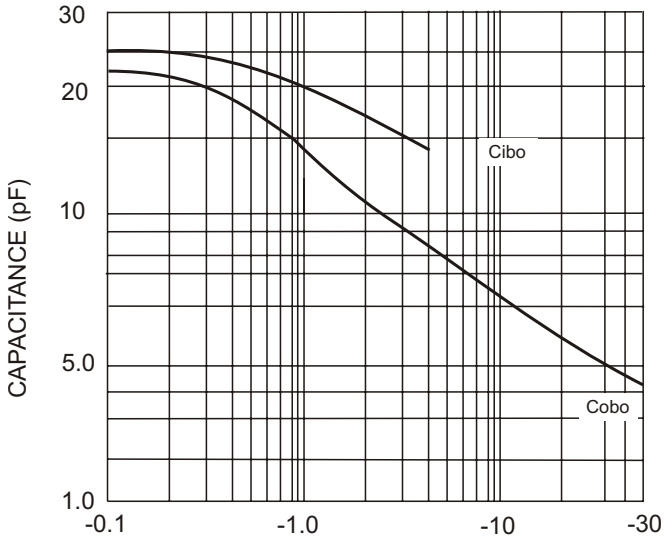

Fig. 7 Typical Capacitance (4403)

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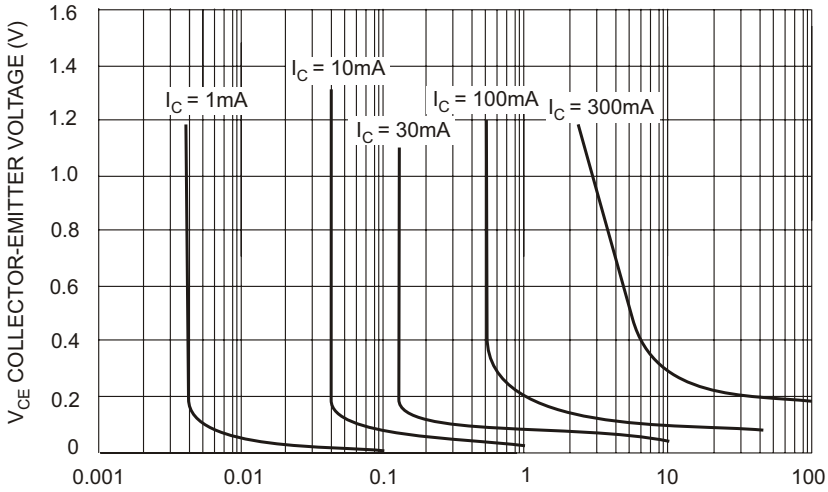

Fig. 8 Typical Collector Saturation Region (4403)

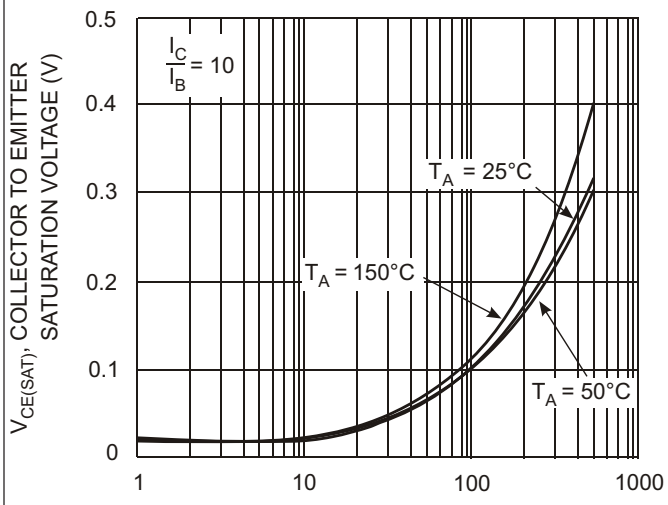

Fig. 9 Collector Emitter Saturation Voltage vs. Collector Current (4403)

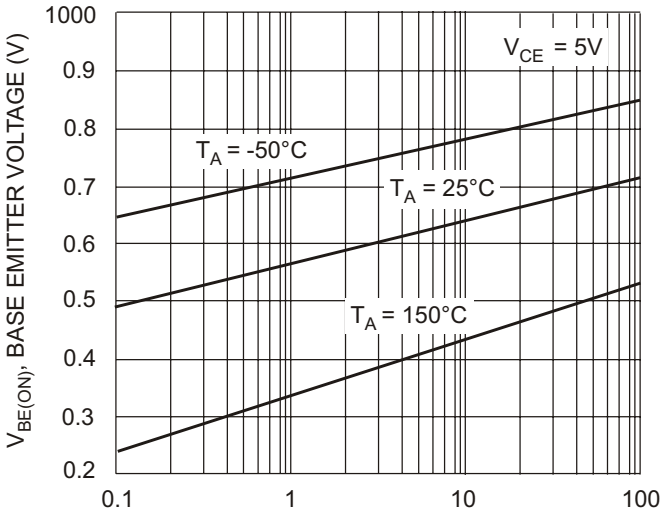

Fig. 10 Base-Emitter Voltage vs. Collector Current (4403)

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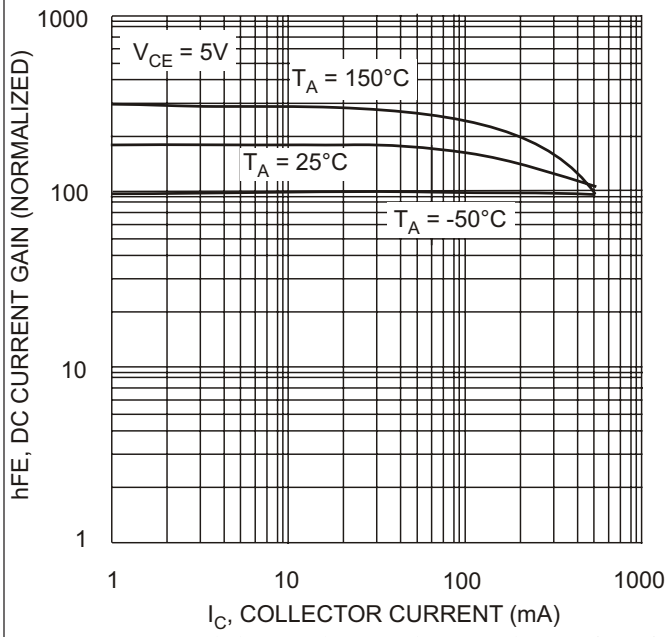


Fig. 11 DC Current Gain vs. Collector Current (4403)

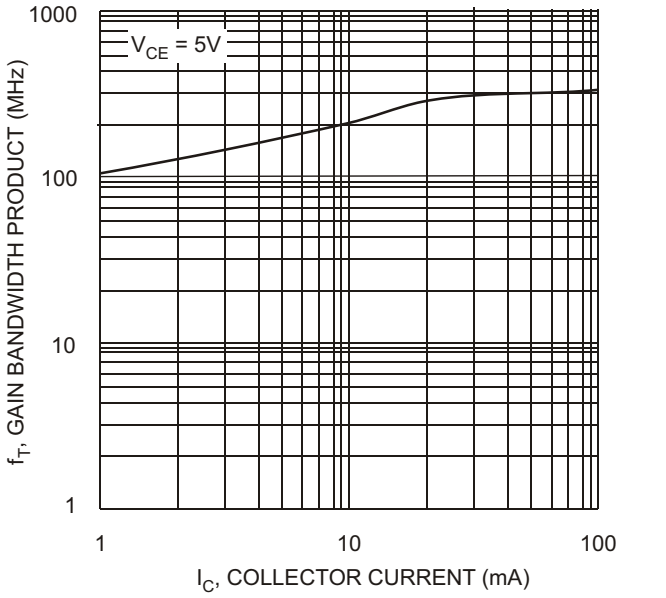


Fig. 12 Gain Bandwidth Product vs. Collector Current (4403)

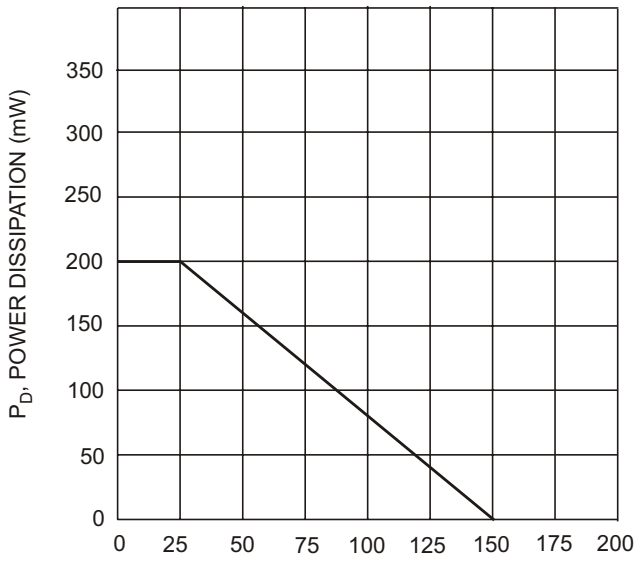
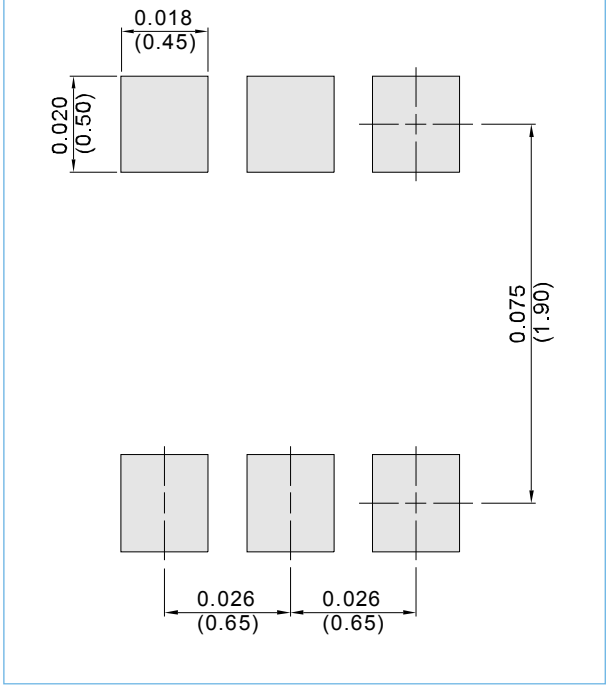


Fig. 13, Max Power Dissipation vs Ambient Temperature (4403)

MMDT4413

MOUNTING PAD LAYOUT

SOT-363 Unit: inch (mm)



ORDER INFORMATION

- Packing information

  T/R - 10K per 13" plastic Reel

  T/R - 3K per 7" plastic Reel

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MMDT4413

Part No_packing code_Version

MMDT4413_R1_00001
MMDT4413_R2_00001

For example :

RB500V-40_R2_00001

- Part No.
- Serial number
- Version code means HF
- Packing size code means 13"
- Packing type means T/R

Packing Code XX				Version Code XXXXX		
Packing type	1st Code	Packing size code	2nd Code	HF or RoHS	1st Code	2nd~5th Code
Tape and Ammunition Box (T/B)	A	N/A	0	HF	0	serial number
Tape and Reel (T/R)	R	7"	1	RoHS	1	serial number
Bulk Packing (B/P)	B	13"	2			
Tube Packing (T/P)	T	26mm	X			
Tape and Reel (Right Oriented) (TRR)	S	52mm	Y			
Tape and Reel (Left Oriented) (TRL)	L	PANASERT T/B CATHODE UP (PBCU)	U			
FORMING	F	PANASERT T/B CATHODE DOWN (PBCD)	D			

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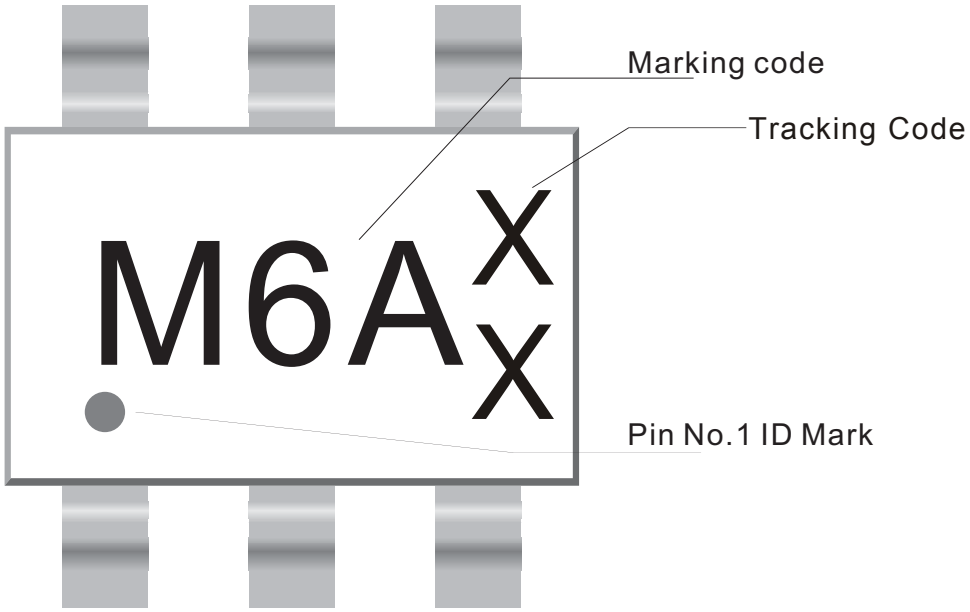
2. MARKING



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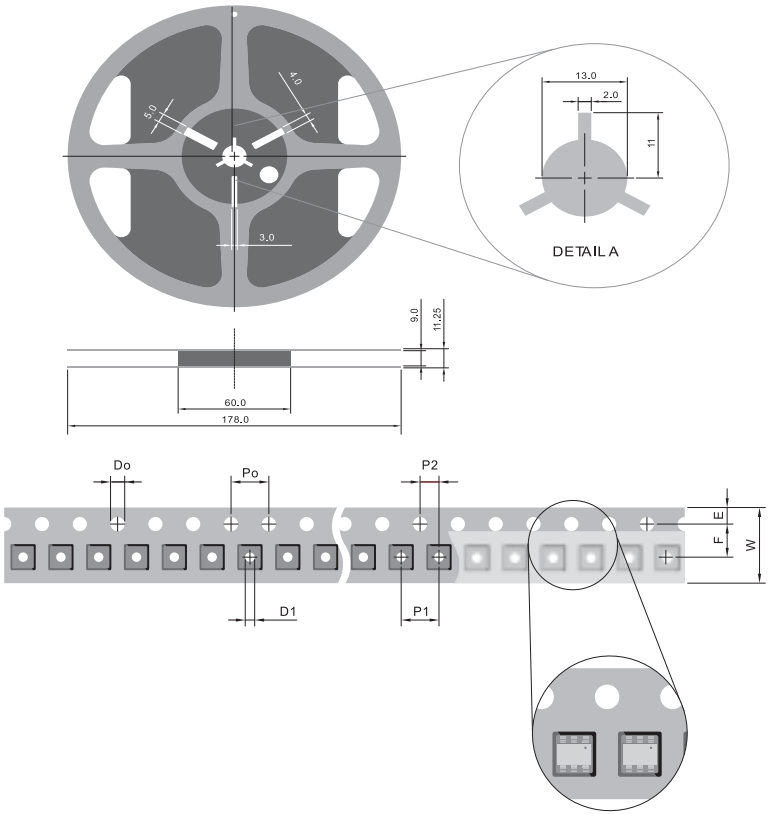
3. TAPING



SYMBOL	mm (inch)
TYPE SIZE	8.00 (0.315)
D0	1.50 ± 0.10(0.061 ± 0.004)
D1	1.00 ± 0.25(0.039 ± 0.010)
E	1.75 ± 0.10(0.069 ± 0.004)
F	3.50 + 0.05(0.137 ± 0.002)
Po	4.00 ± 0.10(0.157 ± 0.004)
P1	4.00 ± 0.10(0.157 ± 0.004)
P2	2.00 ± 0.05(0.079 ± 0.002)
W	$8.00^{+0.3}_{-0.1}$ ($0.315^{+0.012}_{-0.004}$)

NOTE:

1.There shall be leader of 230 mm minimum which may consist of carrier and or cover tape follower by a minimum of 160 mm of carrier tape sealed with cover tape.

2.There shall be minimum of 160 mm of empty component pockets sealed with cover tape.

3.Devices are packed in accordance with EIA standard EIA-481-A and specifications given above.

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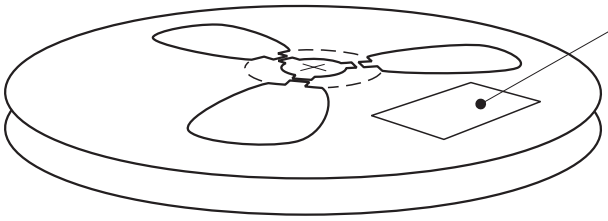
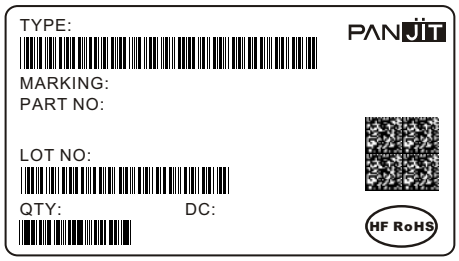
4. PACKING

REEL PACKING

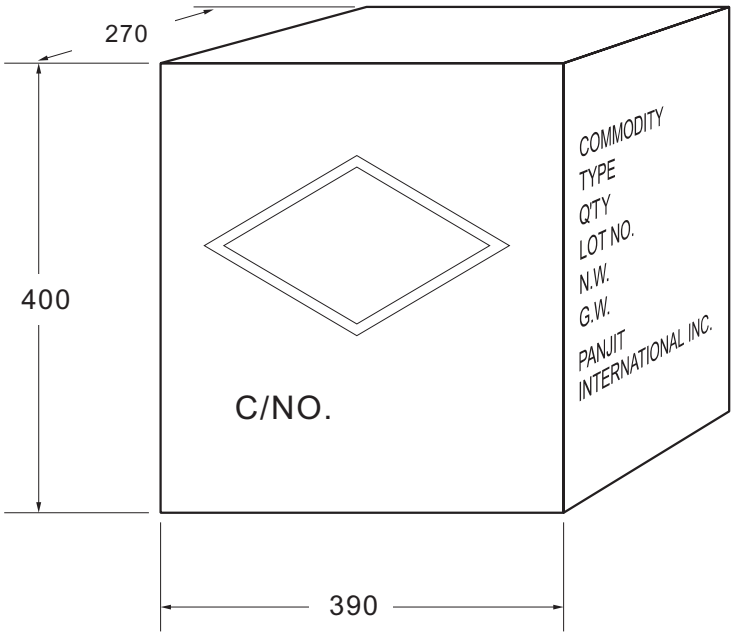


LABEL TYPE



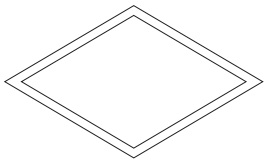
Quantity per Reel: 3,000 pcs

CARTON



Box Dimensions : mm
Quantity per Box: 240,000pcs

SHIPPING MARK



C/NO.
PRODUCT COUNTRY

SIDE MARK

COMMODITY:
TYPE:
Q'TY:
LOT NO.
N.W.
G.W.

PANJIT
INTERNATIONAL INC.

Fax : 02-25215390 極象有限公司 Tel : 02-25651052

Packing Specifications

Package	Reel Size	Reel	Component Space	Tape Space	Reel Dia	Carton Size	Carton	Approx. Gross Weight
	(inch)	(pcs)	(m/m)	(m/m)	(m/m)	(m/m)	(EA)	(Kg)
Reel Packing								
DFN 0603	7	10,000	2	8	178	390 x 270 x 400	800,000	9
DFN 2L	7	8,000	2	8	178	390 x 270 x 400	640,000	8.6
DFN 3L	7	8,000	2	8	178	390 x 270 x 400	640,000	8.6
DFN1616-8L	7	5,000	4	8	178	390 x 270 x 400	400,000	10.4
	13	12,000	4	8	330	375 x 360 x 230	144,000	7.6
SOD-923	7	8,000	2	8	178	390 x 270 x 400	640,000	7.7
SOD-523	7	5,000	4	8	178	390 x 270 x 400	400,000	9.1
	13	12,000	4	8	330	375 x 360 x 230	144,000	5.4
SOD-323HE	7	5,000	4	8	178	390 x 270 x 400	400,000	11.9
	13	12,000	4	8	178	375 x 360 x 230	144,000	8.3
SOD-323	7	5,000	4	8	178	390 x 270 x 400	400,000	9.4
	13	12,000	4	8	330	375 x 360 x 230	144,000	5.9
SOD-123HE	7	3,000	4	8	178	390 x 270 x 400	240,000	12.4
	13	10,000	4	8	330	375 x 360 x 230	120,000	8.1
SOD-123FL	7	3,000	4	8	178	390 x 270 x 400	240,000	10.6
	13	10,000	4	8	330	375 x 360 x 230	120,000	7.2
SOD-123	7	3,000	4	8	178	390 x 270 x 400	240,000	9.9
	13	10,000	4	8	330	375 x 360 x 230	120,000	6.5
SOT-563	7	4,000	4	8	178	390 x 270 x 400	320,000	9.4
	13	10,000	4	8	330	375 x 360 x 230	120,000	5.2
SOT-553	7	4,000	4	8	178	390 x 270 x 400	320,000	9.4
	13	10,000	4	8	330	375 x 360 x 230	120,000	5.2
SOT-543	7	4,000	4	8	178	390 x 270 x 400	320,000	9.4
	13	10,000	4	8	330	375 x 360 x 230	120,000	5.2
SOT-523	7	4,000	4	8	178	390 x 270 x 400	320,000	10
SOT-363	7	3,000	4	8	178	390 x 270 x 400	240,000	10.2
	13	10,000	4	8	330	375 x 360 x 230	120,000	7.1
SOT-363 (ESD)	7	3,000	4	8	178	455 x 270 x 440	240,000	10
SOT-353	7	3,000	4	8	178	390 x 270 x 400	240,000	10
	13	10,000	4	8	330	375 x 360 x 230	120,000	7.2
SOT-23 6L	7	3,000	4	8	178	390 x 270 x 400	240,000	14.5
	13	10,000	4	8	330	375 x 360 x 230	120,000	7.9
SOT-23 6L-1	7	3,000	4	8	178	390 x 270 x 400	240,000	14.5
	13	10,000	4	8	330	375 x 360 x 230	120,000	7.9
SOT-23 5L	7	3,000	4	8	178	390 x 270 x 400	240,000	14.5
	13	10,000	4	8	330	375 x 360 x 230	120,000	7.9
SOT-323	7	3,000	4	8	178	390 x 270 x 400	240,000	7.9
	13	12,000	4	8	330	375 x 360 x 230	144,000	6.1
SOT-323 (ESD)	7	3,000	4	8	178	455 x 270 x 440	240,000	9.4
SOT-23-1	7	3,000	4	8	178	390 x 270 x 400	240,000	9.8
	13	12,000	4	8	330	375 x 360 x 230	144,000	7

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Packing Specifications

Package	Reel Size	Reel	Component Space	Tape Space	Reel Dia	Carton Size	Carton	Approx. Gross Weight
	(inch)	(pcs)	(m/m)	(m/m)	(m/m)	(m/m)	(EA)	(Kg)
Reel Packing								
SOT-23	7	3,000	4	8	178	390 x 270 x 400	240,000	9.8
	13	12,000	4	8	330	375 x 360 x 230	144,000	7
SOT-23 (ESD)	7	3,000	4	8	178	455 x 270 x 440	240,000	9.9
SMAF	7	3,000	4	12	178	390 x 240 x 420	120,000	10.9
	13	10,000	4	12	330	375 x 360 x 422	160,000	17.1
SMBF	7	1,500	8	12	178	390 x 240 x 420	60,000	9.6
	13	5,000	8	12	330	375 x 360 x 422	80,000	15.6
SMA(W)	7	1,800	4	12	178	390 x 240 x 420	100,800	13
	13	7,500	4	12	330	355 x 355 x 400	150,000	20.4
SMA/DO-214AC	7	1,800	4	12	178	390 x 240 x 420	72,000	10
	13	7,500	4	12	330	375 x 360 x 390	120,000	17.4
SMB/DO-214AA	7	500	8	12	178	390 x 240 x 420	20,000	6.5
	13	3,000	8	12	330	375 x 360 x 390	48,000	13.2
SMC/DO-214AB	7	500	8	16	178	390 x 240 x 420	15,000	8.4
	13	3,000	8	16	330	375 x 360 x 390	42,000	18
R-1	13	5,000	5	52	330	340 x 340 x 410	25,000	7.8
A-405	13	5,000	5	52	330	340 x 340 x 410	25,000	7.79
DO-41	13	5,000	5	52	330	340 x 340 x 410	25,000	11.1
DO-15	13	4,000	5	52	330	340 x 340 x 410	20,000	11.4
DO-201AD	13	1,250	10	52	330	340 x 340 x 410	6,250	9.2
DO-201AE	13	1,250	10	52	330	340 x 340 x 410	6,250	9.2
P-600	13	800	10	52	330	340 x 340 x 410	4,000	9.9
DO-34	15	10,000	5	52	360	360 x 360 x 395	50,000	10.1
DO-35	15	10,000	5	52	360	360 x 360 x 395	50,000	11.2
DO-41G	15	5,000	5	52	360	360 x 360 x 395	25,000	10.9
MICRO-MELF	7	2,500	4	-	178	385 x 380 x 260	200,000	9.3
	13	10,000	4	-	330	360 x 360 x 395	200,000	11.5
QUADRO-MELF	13	10,000	4	-	330	360 x 360 x 395	200,000	14.9
	7	2,500	4	-	178	385 x 380 x 260	200,000	13.3
MINI-MELF/LL-34	7	2,500	4	-	178	385 x 380 x 260	200,000	12.7
	13	10,000	4	-	330	360 x 360 x 395	200,000	14.6
MELF/DL-41	7	1,500	4	-	178	385 x 380 x 260	84,000	18.3
	13	5,000	4	-	330	360 x 360 x 395	100,000	23.5
MDI	13	3,000	8	12	330	375 x 360 x 390	48,000	14.7
MICRO DIP/TDI	7	1,000	8	12	178	390 x 240 x 420	40,000	9.5
	13	4,000	8	12	330	375 x 360 x 422	64,000	17
SDIP	13	1,500	12	16	330	375 x 360 x 390	21,000	14.3
TO-277	13	5,000	8	12	330	375 x 360 x 422	80,000	20.6
TO-277B	13	5,000	8	12	330	375 x 360 x 390	80,000	21.8
TO-252/DPAK	13	3,000	8	16	330	375 x 360 x 422	42,000	18.8
TO-263/D^2PAK	13	800	16	24	330	375 x 360 x 422	6,400	14.5

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Packing Specifications

Package	Inner Box Size	Box	Carton Size	Carton	Appox. Gross Weight
	(m/m)	(EA)	(m/m)	(EA)	(Kg)
Bulk Packing					
R-1	198 x 84 x 20	1,000	459 x 214 x 256	50,000	12.7
A-405	198 x 84 x 20	1,000	459 x 214 x 256	50,000	12.7
DO-41	198 x 84 x 20	1,000	459 x 214 x 256	50,000	19.3
DO-15	200 x 85 x 25	1,000	459 x 214 x 256	40,000	20.7
DO-201AD	200 x 85 x 40	500	459 x 214 x 256	12,500	16
DO-201AE	200 x 85 x 40	500	495 x 214 x 256	12,500	16
P-600	208 x 90 x 83	500	459 x 214 x 256	5,000	11.3
DO-34	240 x 100 x 90	2,000	406 x 335 x 257	120,000	14.5
DO-35	240 x 100 x 90	2,000	406 x 335 x 257	120,000	17.1
DO-41G	240 x 100 x 90	1,000	406 x 335 x 257	60,000	18.5
TO-220	540 x 145 x 85	2,000	555 x 306 x 200	8,000	22.9
ITO-220	540 x 145 x 85	2,000	555 x 306 x 200	8,000	20.5
TO-251AB/DPAK	555 x 145 x 95	8,400	572 x 306 x 218	33,600	22
TO-3PN	-	-	600x185x230	1,800	16.4
TO-247AD/TO-3P	-	-	530 x 243 x 100	1,500	13.9
TO-247S/TO-3PS	-	-	511 x 243 x 107	1,500	12.2
DIP	-	-	459 x 214 x 256	12,000	6.5
SDIP	-	-	459 x 214 x 256	24,000	15.7

Package	Inner Box Size	Ammo	Component Space	Tape Space	Carton Size	Carton	Appox. Gross Weight
	(m/m)	(pcs)	(m/m)	(m/m)	(m/m)	(EA)	(Kg)
Ammunition Packing							
R-1	255 x 47 x 73	3,000	5	26	310 x 268 x 170	36,000	6.3
	255 x 73 x 73	3,000	5	52	310 x 268 x 170	24,000	6.3
	255 x 73 x 122	5,000	5	52	339 x 276 x 274	40,000	10.3
A-405	255 x 47 x 150	5,000	5	26	339 x 276 x 330	60,000	12.4
	255 x 75 x 150	5,000	5	52	339 x 276 x 330	40,000	16
DO-41	255 x 75 x 150	5,000	5	52	339 x 276 x 330	40,000	15.9
DO-15	255 x 75 x 150	3,000	5	52	339 x 276 x 330	24,000	13.3
DO-201AD	255 x 47 x 122	1,250	10	52	339 x 276 x 330	10,000	13.4
DO-201AE	255 x 47 x 122	1,250	10	52	339 x 276 x 330	10,000	13.4
P-600	255 x 47 x 122	400	10	52	339 x 276 x 330	3,200	8.1
DO-34	248 x 80 x 48	5,000	5	26	406 x 335 x 257	150,000	14.5
	248 x 80 x 75	5,000	5	52	406 x 335 x 257	100,000	12.7
DO-35	248 x 80 x 48	5,000	5	26	406 x 335 x 257	150,000	16.7
	248 x 80 x 75	5,000	5	52	406 x 335 x 257	100,000	15.2
DO-41G	248 x 80 x 48	2,500	5	26	406 x 335 x 257	75,000	17.1
	248 x 80 x 75	2,500	5	52	406 x 335 x 257	50,000	15.6

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5.HIGH RELIABILITY TEST SPEC
（MOSFET、TRANSISTORS）

Date：2010.07.05 rev.01

NO.	TEST ITEM	TEST CONDITION	REFERENCED DOCUMENT	LOT QUALITY LEVEL
1	TEMPERATURE CYCLING (T.C.T) 溫度循環試驗	Ta＝－55＋0℃/－10℃　10min(Min) Ta＝＋150＋15℃/－0℃　10min(Min) FOR　20CYCLES	MIL-STD-750D METHOD-1051.5 Condition G	LTPD 10 S.S＝22 ACCEPT FOR 0 FAILURE ONLY.
2	HIGH TEMPERATURE STORAGE LIFE (H.T.S.L) 高溫儲存壽命試驗	Ta＝Storage Temperature Range (device specified maximum temperature)	MIL-STD-750D METHOD-1032.2	LTPD 10 S.S = 22 ACCEPT FOR 0 FAILURE ONLY.
3	SOLDERABILITY TEST 銲錫性試驗	Temperature of Solder TEMPERATURE OF SOLDER POT＝245＋/－5℃ TIME FOR DIPPING IN SOLDER＝5＋/－0.5 SEC DIPPING DEPTH＝0.05inch max from the body FOR ONE CYCLE	MIL-STD-750D METHOD-2026.10	LTPD 7 S.S＝32 ACCEPT FOR 0 FAILURE ONLY.
4	HIGH TEMPERATURE REVERSE BIAS (H.T.R.B) 高溫逆向偏壓	Tj≦Tj max VR=0.8VR(CUSTOMER SPEC.) DC supply	MIL-STD-750D METHOD-1038.3	LTPD 10 S.S＝22 ACCEPT FOR 0 FAILURE ONLY.
5	THERMAL SHOCK (T.S.T) 冷熱衝擊試驗	HOT TANK　Ta＝100＋10/－2℃ t= 5min COLD TANK Ta＝0＋2/－10℃　t= 5min 15 CYCLES TIME BETWEEN TRANSFERRING DO NOT EXCEED 10 SEC	MIL-STD-750D METHOD 1056.7	LTPD 10 S.S＝22 ACCEPT FOR 0 FAILURE ONLY.
6	PRESSURE COOKER (P.C.T) 壓力鍋試驗	Ta＝121℃ P＝29.7psia / 205kPa or 2.088kg/㎠ Relative Humidity = 100%	JEDEC JESD22-A102-C	LTPD 10 S.S＝22 ACCEPT FOR 0 FAILURE ONLY.
7	HUMIDITY 恆溫濕試驗	Ta=85+/-2℃ RH=85+/-5%	EIAJ ED-4701 METHOD 103	LTPD 10 S.S＝22 ACCEPT FOR 0 FAILURE ONLY.
8	SOLDER RESISTANCE 銲錫耐熱性試驗	TEMPERATURE OF SOLDER POT＝260＋/－5℃ TIME FOR DIPPING IN SOLDER＝10＋2/－0 SEC DIPPING DEPTH＝1.57＋/－0.79mm FROM THE BODY FOR ONE CYCLE	MIL-STD-750D METHOD 2031.2	LTPD 10 S.S＝22 ACCEPT FOR 0 FAILURE ONLY.

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