



MMDT4403TB6

DUAL PNP GENERAL PURPOSE SWITCHING TRANSISTOR

VOLTAGE 40 Volts **POWER** 200 mWatts

SOT-563 Unit : inch(mm)

FEATURES

- PNP epitaxial silicon, planar design
- Collector-emitter voltage $V_{CE} = -40V$
- Collector current $I_C = -500mA$
- Lead free in comply with EU RoHS 2002/95/EC directives.
- Green molding compound as per IEC61249 Std. . (Halogen Free)

MECHANICAL DATA

- Case: SOT-563, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.003 grams
- Marking: TZ

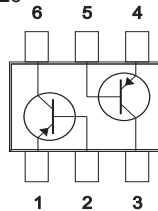
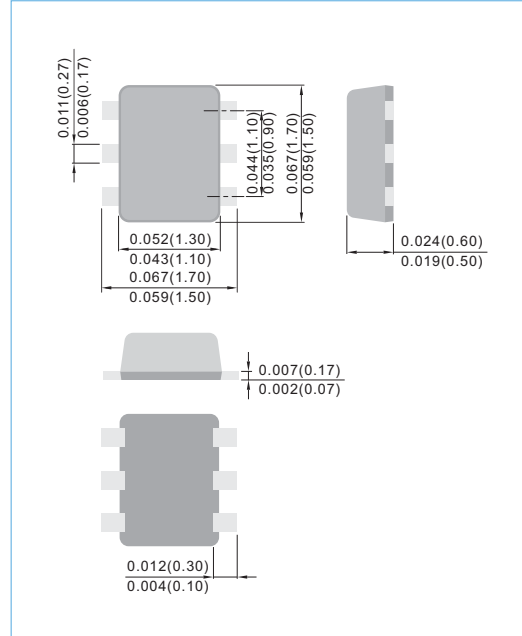


Fig.53



ABSOLUTE RATINGS

Parameter	Symbol	Value	Units
Collector - Emitter Voltage	V_{CEO}	-40	V
Collector - Base Voltage	V_{CBO}	-40	V
Emitter - Base Voltage	V_{EBO}	-5.0	V
Collector Current - Continuous	I_C	-500	mA

THERMAL CHARACTERISTICS

Parameter	Symbol	Value	Units
Max Power Dissipation (Note 1)	P_{TOT}	200	mW
Thermal Resistance , Junction to Ambient	$R_{\theta JA}$	625	$^{\circ}C/W$
Junction Temperature	T_J	-55 to 150	$^{\circ}C$
Storage Temperature	T_{STG}	-55 to 150	$^{\circ}C$

Note 1: Transistor mounted on FR-4 board 70 x 60 x 1mm.



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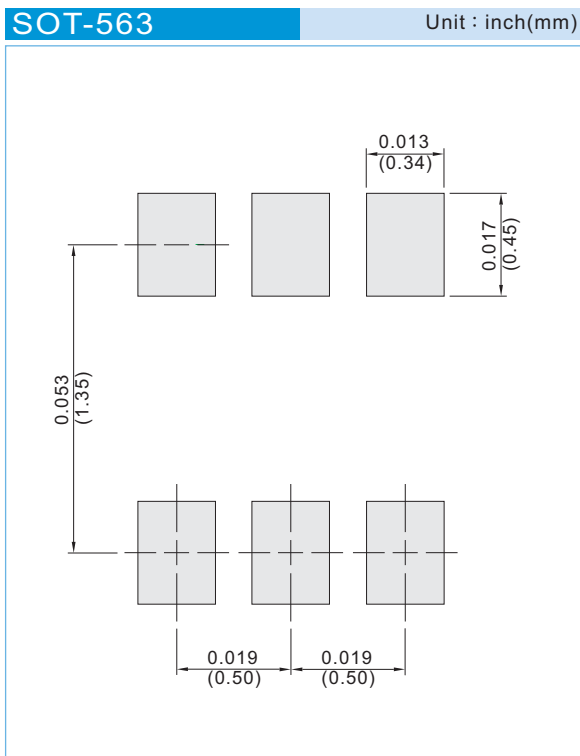
ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Test Condition	MIN.	TYP.	MAX.	Units
Collector - Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -1.0mA, I_B = 0$	-40	-	-	V
Collector - Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -100\mu A, I_E = 0$	-40	-	-	V
Emitter - Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -100\mu A, I_C = 0$	-5.0	-	-	V
Base Cutoff Current	I_{BL}	$V_{CE} = -35V, V_{EB} = -0.4V$	-	-	-100	nA
Collector Cutoff Current	I_{CEX}	$V_{CE} = -35V, V_{EB} = -0.4V$	-	-	-100	nA
DC Current Gain (Note 2)	h_{FE}	$I_C = -0.1mA, V_{CE} = -1.0V$	30	-	-	-
		$I_C = -1.0mA, V_{CE} = -1.0V$	60	-	-	
		$I_C = -10mA, V_{CE} = -1.0V$	100	-	-	
		$I_C = -150mA, V_{CE} = -2.0V$	90	-	300	
		$I_C = -500mA, V_{CE} = -2.0V$	20	-	-	
Collector - Emitter Saturation Voltage (Note 2)	$V_{CE(SAT)}$	$I_C = -150mA, I_B = -15mA$ $I_C = -500mA, I_B = -50mA$	-	-	-0.40 -0.75	V
Base - Emitter Saturation Voltage (Note 2)	$V_{BE(SAT)}$	$I_C = -150mA, I_B = -15mA$ $I_C = -500mA, I_B = -50mA$	0.75 -	-	-0.95 -1.30	V
Collector - Base Capacitance	C_{CBO}	$V_{CB} = -5V, I_E = 0, f = 1MHz$	-	-	6.5	pF
Emitter - Base Capacitance	C_{EBO}	$V_{CB} = -0.5V, I_C = 0, f = 1MHz$	-	-	30	pF
Current Gain - Bandwidth Product	F_T	$V_{CE} = -10V, I_C = -20mA,$ $f = 100MHz$	200	-	-	MHz
Delay Time	t_d	$V_{CC} = -30V, V_{BE} = -2.0V,$ $I_C = -150mA, I_{B1} = -15mA$	-	-	15	ns
Rise Time	t_r	$V_{CC} = -30V, V_{BE} = -2.0V,$ $I_C = -150mA, I_{B1} = -15mA$	-	-	20	ns
Storage Time	t_s	$V_{CC} = -30V, I_C = -150mA$ $I_{B1} = I_{B2} = -15mA$	-	-	225	ns
Fall Time	t_f	$V_{CC} = -30V, I_C = -150mA$ $I_{B1} = I_{B2} = -15mA$	-	-	30	ns



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MOUNTING PAD LAYOUT



ORDER INFORMATION

- Packing information

T/R - 4K per 7" plastic Reel

T/R - 10K per 13" plastic Reel

LEGAL STATEMENT

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