

6367255 MOTOROLA SC (DIODES/OPTO)

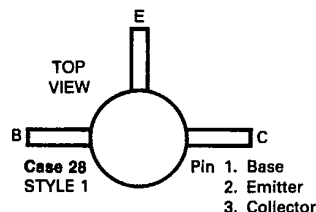
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7-29-17

MICRO-T (continued)

MMT70 — NPN

SMALL-SIGNAL TRANSISTOR



- designed for low-level, low-noise amplifier applications.

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V_{CEO}	20	Vdc
Collector-Base Voltage	V_{CB}	25	Vdc
Emitter-Base Voltage	V_{EB}	5.0	Vdc
Collector Current	I_C	50	mA _{dc}
Total Device Dissipation @ $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	250 2.0	mW mW/ $^\circ\text{C}$
Operating and Storage Junction Temperature Range	T_J, T_{stg}	-55 to +150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	0.50	$^\circ\text{C}/\text{mW}$

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Test Conditions	Min	Typ	Max	Unit
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OFF CHARACTERISTICS

BV_{CEO}	$I_C = 10 \text{ mA}_{dc}, I_B = 0$	20	—	—	Vdc
BV_{CBO}	$I_C = 10 \mu\text{A}_{dc}, I_E = 0$	25	—	—	Vdc
BV_{EBO}	$I_E = 10 \mu\text{A}_{dc}, I_C = 0$	5.0	—	—	nA _{dc}
I_{CBO}	$V_{CB} = 15 \text{ Vdc}, I_E = 0$	—	—	50	nA _{dc}

ON CHARACTERISTICS

h_{FE}	$I_C = 2.0 \text{ mA}_{dc}, V_{CE} = 5.0 \text{ Vdc}$	150	—	—	—
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DYNAMIC CHARACTERISTICS

C_{ob}	$V_{CB} = 5.0 \text{ Vdc}, I_E = 0, f = 1.0 \text{ MHz}$	—	—	8.0	pF
C_{ib}	$V_{BE} = 0.5 \text{ Vdc}, I_C = 0, f = 1.0 \text{ MHz}$	—	—	8.0	pF
NF	$I_C = 10 \mu\text{A}_{dc}, V_{CE} = 5.0 \text{ Vdc},$ $R_s = 10 \text{ k}\Omega, f = 10 \text{ Hz to } 15.7 \text{ kHz}$	—	1.0	—	dB