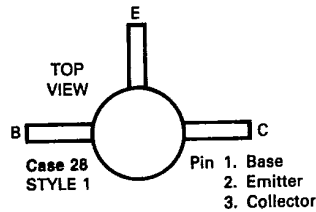


6367255 MOTOROLA SC (DIODES/OPTO)

34C 38200 D

7-37-15

MICRO-T (continued)

MMT73 — PNP
SWITCHING TRANSISTOR

- designed for high-speed, low-current switching applications where high-density packaging is required.

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V_{CEO}	8.0	Vdc
Collector-Emitter Voltage	V_{CES}	8.0	Vdc
Emitter-Base Voltage	V_{EB}	4.0	Vdc
Collector Current — Continuous	I_C	200	mAdc
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	Max	Unit
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OFF CHARACTERISTICS

BV_{CEO}	$I_C = 10 \text{ mAdc}, I_B = 0$	8.0	—	Vdc
BV_{CES}	$I_C = 100 \mu\text{Adc}, V_{BE} = 0$	8.0	—	Vdc
BV_{EBO}	$I_C = 100 \mu\text{Adc}, I_C = 0$	4.0	—	Vdc
I_{CBO}	$V_{CB} = 3.0 \text{ Vdc}, I_E = 0$	—	100	nAdc

ON CHARACTERISTICS

h_{FE}	$I_C = 10 \text{ mAdc}, V_{CE} = 1.0 \text{ Vdc}$ $I_C = 50 \text{ mAdc}, V_{CE} = 1.0 \text{ Vdc}$	30 20	—	—
$V_{CE(sat)}$	$I_C = 10 \text{ mAdc}, I_B = 1.0 \text{ mAdc}$	—	0.2	Vdc

DYNAMIC CHARACTERISTICS

f_T	$I_C = 10 \text{ mAdc}, V_{CE} = 5.0 \text{ Vdc}, f = 100 \text{ MHz}$	400	—	MHz
C_{ob}	$V_{CB} = 5.0 \text{ Vdc}, I_E = 0, f = 1.0 \text{ MHz}$	—	5.0	pF

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continued

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MICRO-T (continued)

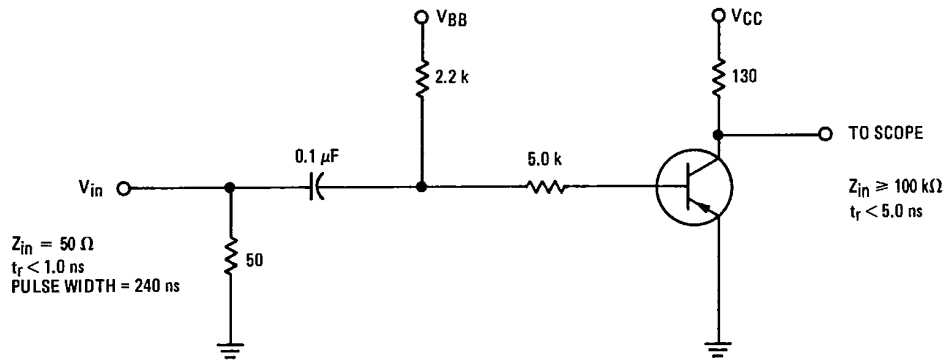
MMT73 (continued)

T-37-15

SWITCHING CHARACTERISTICS

t_{on}	$V_{CC} = 1.5 \text{ Vdc}, I_C = 10 \text{ mA}, I_{B1} = 1.0 \text{ mA}$	—	30	ns
t_{off}	$V_{CC} = 1.5 \text{ Vdc}, I_C = 10 \text{ mA}, I_{B1} = I_{B2} = 1.0 \text{ mA}$	—	30	ns

FIGURE 1 – TURN-ON AND TURN-OFF TIME TEST CIRCUIT



	V_{in} Vdc	V_{BB} Vdc	V_{CC} Vdc	I_C mA	I_{B1} mA	I_{B2} mA
t_{on}	-5.8	Gnd	-1.5	10	1.0	1.0
t_{off}	+10	-8.0	-1.5	10	1.0	1.0