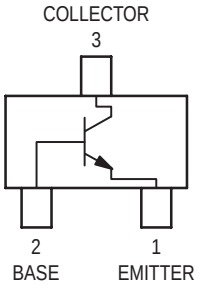
NPN General Purpose Amplifier Transistor Surface Mount

MSD602-RT1

Motorola Preferred Device



CASE 318D–03, STYLE 1
SC–59

MAXIMUM RATINGS (T_A = 25°C)

Rating	Symbol	Value	Unit
Collector–Base Voltage	$V_{(BR)CBO}$	60	Vdc
Collector–Emitter Voltage	$V_{(BR)CEO}$	50	Vdc
Emitter–Base Voltage	$V_{(BR)EBO}$	7.0	Vdc
Collector Current — Continuous	I_C	500	mAdc
Collector Current — Peak	$I_{C(P)}$	1.0	Adc

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Power Dissipation	P_D	200	mW
Junction Temperature	T_J	150	°C
Storage Temperature	T_{stg}	–55 ~ +150	°C

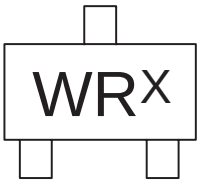
ELECTRICAL CHARACTERISTICS (T_A = 25°C)

Characteristic	Symbol	Min	Max	Unit
Collector–Emitter Breakdown Voltage (I_C = 10 mAdc, I_B = 0)	$V_{(BR)CEO}$	50	—	Vdc
Collector–Base Breakdown Voltage (I_C = 10 μAdc, I_E = 0)	$V_{(BR)CBO}$	60	—	Vdc
Emitter–Base Breakdown Voltage (I_E = 10 μAdc, I_C = 0)	$V_{(BR)EBO}$	7.0	—	Vdc
Collector–Base Cutoff Current (V_{CB} = 20 Vdc, I_E = 0)	I_{CBO}	—	0.1	μAdc
DC Current Gain(1) (V_{CE} = 10 Vdc, I_C = 150 mAdc) (V_{CE} = 10 Vdc, I_C = 500 mAdc)	 h_{FE1} h_{FE2}	 120 40	 240 —	—
Collector–Emitter Saturation Voltage (I_C = 300 mAdc, I_B = 30 mAdc)	$V_{CE(sat)}$	—	0.6	Vdc
Output Capacitance (V_{CB} = 10 Vdc, I_E = 0, f = 1.0 MHz)	C_{ob}	—	15	pF

1. Pulse Test: Pulse Width ≤ 300 μs, D.C. ≤ 2%.

DEVICE MARKING

Marking Symbol



The “X” represents a smaller alpha digit Date Code. The Date Code indicates the actual month in which the part was manufactured.

Preferred devices are Motorola recommended choices for future use and best overall value.

REV 1