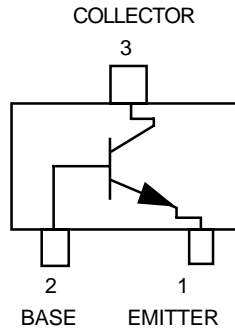


# NPN General Purpose Amplifier Transistor Surface Mount

**MSD602-RT1**



CASE 318D-03, STYLE1  
SC-59

## MAXIMUM RATINGS (T<sub>A</sub> = 25°C)

Rating	Symbol	Value	Unit
Collector-Base Voltage	V <sub>(BR)CBO</sub>	60	Vdc
Collector-Emitter Voltage	V <sub>(BR)CEO</sub>	50	Vdc
Emitter-Base Voltage	V <sub>(BR)EBO</sub>	7.0	Vdc
Collector Current-Continuous	I <sub>C</sub>	500	mAdc
Collector Current-Peak	I <sub>C(P)</sub>	1.0	Adc

## THERMAL CHARACTERISTICS

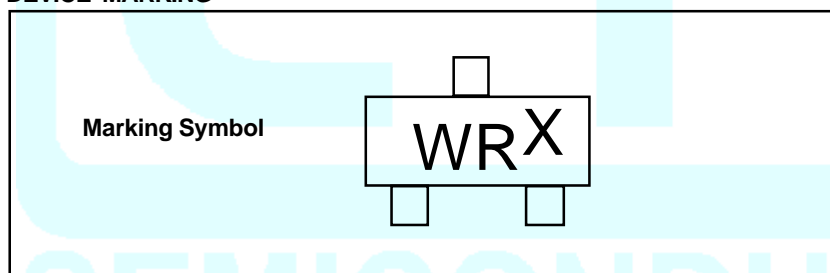
Characteristic	Symbol	Max	Unit
Power Dissipation	P <sub>D</sub>	200	mW
Junction Temperature	T <sub>J</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-55 ~ +150	°C

## ELECTRICAL CHARACTERISTICS (T<sub>A</sub> = 25°C)

Characteristic	Symbol	Min	Max	Unit
Collector-Emitter Breakdown Voltage (I <sub>C</sub> = 10 mAdc, I <sub>B</sub> = 0)	V <sub>(BR)CEO</sub>	50	—	Vdc
Collector-Base Breakdown Voltage (I <sub>C</sub> = 10 μAdc, I <sub>E</sub> = 0)	V <sub>(BR)CBO</sub>	60	—	Vdc
Emitter-Base Breakdown Voltage (I <sub>E</sub> = 10 μAdc, I <sub>C</sub> = 0)	V <sub>(BR)EBO</sub>	7.0	—	Vdc
Collector-Base Cutoff Current (V <sub>CB</sub> = 20Vdc, I <sub>E</sub> = 0)	I <sub>CBO</sub>	—	0.1	μAdc
DC Current Gain <sup>(1)</sup>				—
(V <sub>CE</sub> = 10 Vdc, I <sub>C</sub> = 150 mAdc)	h <sub>FE1</sub>	120	240	
(V <sub>CE</sub> = 10 Vdc, I <sub>C</sub> = 500 mAdc)	h <sub>FE2</sub>	40	—	
Collector-Emitter Saturation Voltage (I <sub>C</sub> = 300 mAdc, I <sub>B</sub> = 30 mAdc)	V <sub>CE(sat)</sub>	—	0.6	Vdc
Output Capacitance (V <sub>CB</sub> = 10Vdc, I <sub>E</sub> = 0, f = 1.0MHz)	C <sub>cb</sub>	—	15	pF

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

## DEVICE MARKING



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