



This device is designed for use as general purpose amplifier and switches requiring collector currents to 300Ma. Sourced from Process 10. See PN100A for characteristics.

Absolute Maximum Ratings * $T_A=25$ unless otherwise noted

Symbol	Parameter	Value	Units
V_{CEO}	Collector-Emitter Voltage	30	V
V_{CES}	Collector-Base Voltage	30	V
V_{EBO}	Emitter-Base Voltage	5.0	V
I_C	Collector Current –Continuous	500	mA
T_J, T_{stg}	Operating and Storage Junction Temperature Range	-55 to +150	

*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

Notes:

- 1) These rating are based on a maximum junction temperature of 150 degrees C.
- 2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

Thermal Characteristics $T_A=25$ unless otherwise noted

Symbol	Characteristic	Max	Units
		BC548/A/B/C	
P_D	Total Device Dissipation Derate above 25	625	mW
		5.0	mW/
$R_{\theta JC}$	Thermal Resistance, Junction to Case	83.3	/W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	200	/W

Electrical Characteristics $T_A=25$ unless otherwise Noted

Symbol	Parameter	Test Conditions	Min	Max	Units
OFF CHARACTERISTICS					
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=10mA, I_B=0$	30		V
$V_{(BR)CBO}$	Collector-Emitter Breakdown Voltage	$I_C=10\mu A, I_E=0$	30		V
$V_{(BR)CES}$	Collector-Base Breakdown Voltage	$I_C=10\mu A, I_E=0$	30		V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=30V, I_C=0$	5.0		
I_{CBO}	Collector Cutoff Current	$V_{CB}=30V, I_E=0$		15	nA
		$V_{CB}=30V, I_E=0, T_A=+150$		5.0	μA
ON CHARACTERISTICS					
h_{FE}	DC Current Gain	$V_{CE}=5.0V, I_C=2.0mA$	548	110	800
			548A	110	220
			548B	200	450
			548C	420	800
$V_{CE(sat)}$	Collector-Emitter Saturation	$I_C=10mA, I_B=0.5mA$		0.25	V
		$I_C=100mA, I_B=5.0mA$		0.60	V
$V_{BE(on)}$	Base-Emitter On Voltage	$V_{CE}=5.0V, I_C=2.0mA$	0.58	0.70	V
		$V_{CE}=5.0V, I_C=10mA$		0.77	V