

Features

- · For Switching and AF Amplifier Applications
- Halogen Free. "Green" Device (Note 1)
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

PNP Small Signal Transistor

Maximum Ratings

• Operating Junction Temperature Range: -55°C to +150°C

• Storage Temperature Range: -55°C to +150°C

Thermal Resistance: 320°C/W Junction to Solder-point (Note2)

Thermal Resistance: 403°C/W Junction to Ambient (Note2)

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V _{CBO}	-30	V
Collector-Emitter Voltage	V _{CEO}	-30	V
Emitter-Base Voltage	V _{EBO}	-5	V
Collector Current	Ic	-100	mA
Peak Collector Current	I _{CM}	-200	mA
Peak Emitter Current	I _{EM}	-200	mA
Power Dissipation T _S =50°C (Note2)	P _D	310	mW

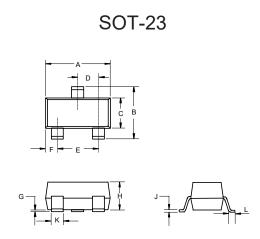
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Package Mounted 1.0*1.0mm Pad Layout 1oz Copper That is On a Single-sided FR4 PCB.

Part Number	BC858A	BC858B	BC858C
Marking	3J	3K	3L

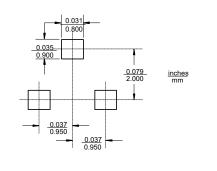
Internal Structure





	DIMENSIONS					
DIM	DIM INCHES		M	М	NOTE	
DIIVI	MIN	MAX	MIN	MAX	NOIL	
Α	0.110	0.120	2.80	3.04		
В	0.083	0.104	2.10	2.64		
С	0.047	0.055	1.20	1.40		
D	0.034	0.041	0.85	1.05		
Е	0.067	0.083	1.70	2.10		
F	0.018	0.024	0.45	0.60		
G	0.0004	0.006	0.01	0.15		
Н	0.035	0.043	0.90	1.10		
J	0.003	0.007	0.08	0.18		
K	0.014	0.020	0.35	0.51		
L	0.007	0.020	0.20	0.50		

Suggested Solder Pad Layout





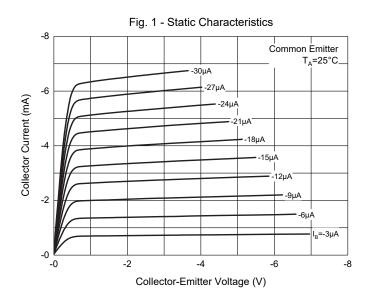
Electrical Characteristics @ 25°C Unless Otherwise Specified

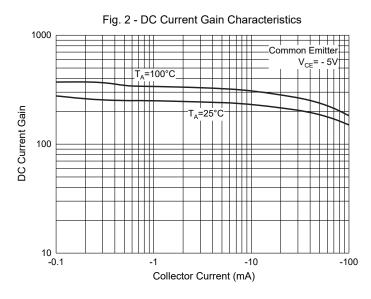
Parameter		Symbol	Min	Тур	Max	Units	Conditions
Collector-Base Breakdown Voltage ^(Note3)		$V_{(BR)CBO}$	-30			V	I_{C} =-10 μ A, I_{E} =0
Collector-Emitter Breakdown Voltage ^(Note3)		$V_{(BR)CEO}$	-30			V	I _C =-10mA, I _B =0
Emitter-Base Breakdown Voltage	Note3)	$V_{(BR)EBO}$	-5			V	$I_E = -1 \mu A, I_C = 0$
		I _{CES}			-15	nA	V _{CE} =-30V
Collector-Cutoff Current (Note3)		1			-15	nA	V _{CB} =-30V
		I _{CBO}			-4	μA	V _{CB} =-30V, T _A =150°C
	BC858 A	h _{FE}	125	180	250		
DC Current Gain (Note3)	BC858 B		220	290	475		V _{CE} =-5Vdc, I _C =-2mA
	BC858 C		420	520	800		
	BC858 A			200			
Small Signal Current Gain	BC858 B	h _{fe}		330			
_	BC858 C			600			
Input Impedance	BC858 A			2.7			
	BC858 B	h _{ie}		4.5		ΚΩ	V _{CE} =-5V I _C =-2mA f=1KHz
	BC858 C			8.7			
	BC858 A			18		μS	
Output Admittance	BC858 B	h _{oe}		30			
	BC858 C			60			
	BC858 A			1.5x10 ⁻⁴			
Reverse Voltage Transfer Ratio	BC858 B	h _{re}		2x10 ⁻⁴			
	BC858 C			3x10 ⁻⁴			
0 11 11 5 111 0 1 11 11 11	(Note3)	V _{CE(sat)}		-75	-300	mV	I _C =-10mA, I _B =-0.5mA
Collector-Emitter Saturation Voltage	ge (Moleo)			-250	-650	mV	I _C =-100mA, I _B =-5mA
· · · · · · · · · · · · · · · · · ·	lote3)	\/		-700		mV	I _C =-10mA, I _B =-0.5mA
Base-Emitter Saturation Voltage (Note3)		V _{BE(sat)}		-850		mV	I _C =-100mA, I _B =-5mA
Base-Emitter Voltage (Note3)		V _{BE}	-600	-650	-750	mV	V_{CE} =-5V, I_{C} =-2mA
					-820	mV	V _{CE} =-5V, I _C =-10mA
Current Gain-Bandwidth Product		f _T	100	200		MHz	V_{CE} =-5V, I_{C} =-10mA, f=100MHz
Collector-Base Capacitance		C _{CBO}		3		pF	V _{CB} =-10V, f=1MHz
Noise Figure		NF		2	10	10 dB	V _{CE} =-5V, I _C =-200μA
		141		-			R_S =2KΩ, f=1KHz, Δ f=200Hz

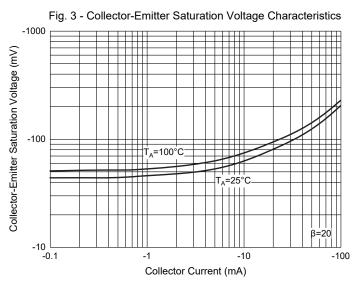
Note: 3. Short Duration Pulse Test to Minimize Self-heating Effect.

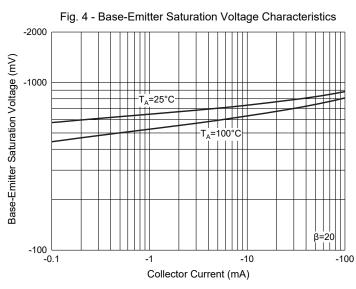


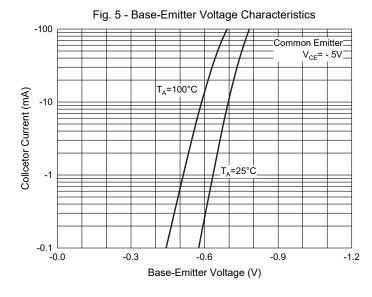
Curve Characteristics

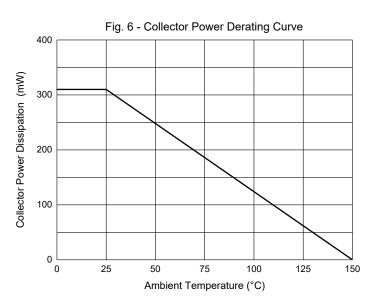














Ordering Information

Device	Packing			
Part Number-TP	Tape&Reel: 3Kpcs/Reel			

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