

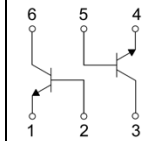
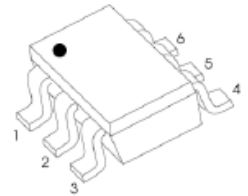
Features

- Epoxy meets UL-94 V-0 flammability rating
- Surface mount package ideally Suited for Automatic Insertion

Mechanical Data

- **Package:** SOT-363
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Marking:** 1F

SOT-363



MAXIMUM RATINGS (T_a=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V _{CBO}	Collector-Base Voltage	50	V
V _{CEO}	Collector-Emitter Voltage	45	
V _{EBO}	Emitter-Base Voltage	6	
I _C	Collector Current-Continuous	100	mA
P _D	Power Dissipation	200	mW
R _{θJA}	Thermal Resistance. Junction to Ambient	625	°C/W
T _J , T _{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C

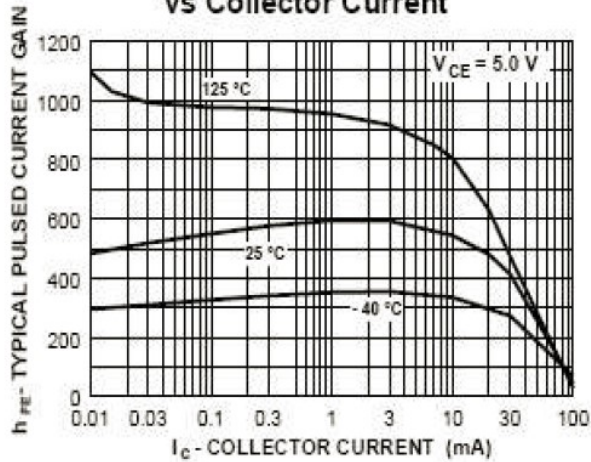
ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =10μA, I _E =0	50			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C =1mA, I _B =0	45			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =10μA, I _C =0	6			V
Collector cut-off current	I _{CBO}	V _{CB} =30V, I _E =0			15	nA
Emitter cut-off current	I _{EBO}	V _{EB} =4V, I _C =0			15	
DC current gain*	h _{FE}	V _{CE} =5V, I _C =2mA	200		450	
Collector-emitter saturation voltage	V _{CE(sat)(1)}	I _C =10mA, I _B =0.5mA			0.25	V
	V _{CE(sat)(2)}	I _C =100mA, I _B =5mA			0.65	V
Base-emitter voltage	V _{BE(1)}	V _{CE} =5V, I _C =2mA	0.58		0.7	V
	V _{BE(2)}	V _{CE} =5V, I _C =10mA			0.77	V
Transition frequency	f _T	V _{CE} =5V, I _C =20mA, f=100MHz		200		MHz
Collector output capacitance	C _{ob}	V _{CB} =10V, I _E =0, f=1MHz		2		pF

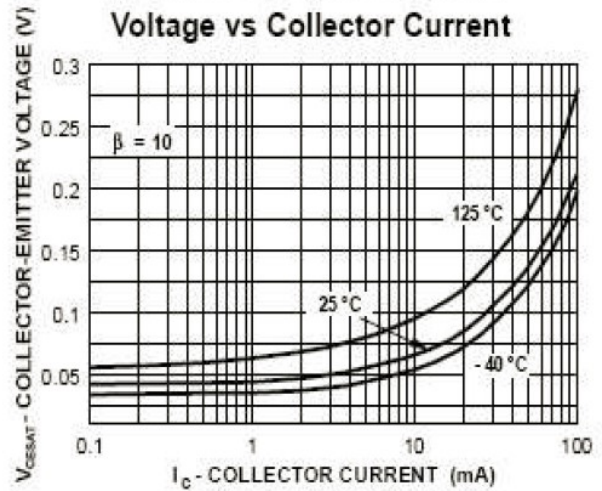
*pulse test: Pulse Width ≤300μs, Duty Cycle≤ 2.0%.

Typical Characteristics

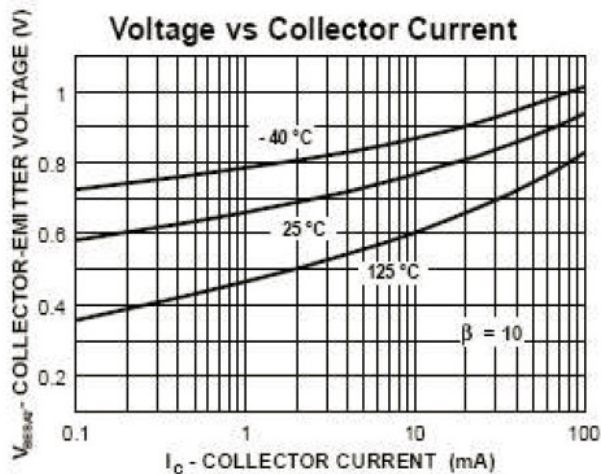
Typical Pulsed Current Gain
vs Collector Current



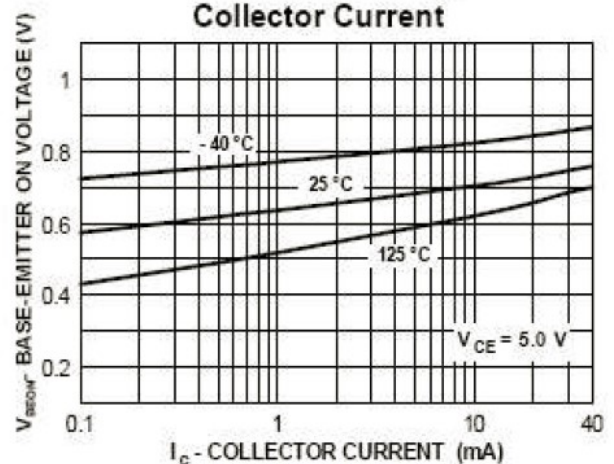
Collector-Emitter Saturation
Voltage vs Collector Current



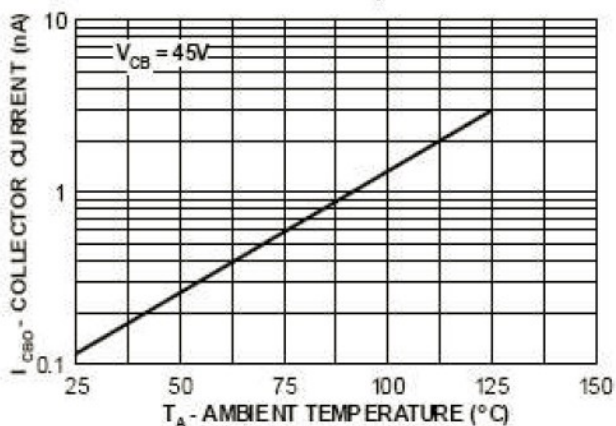
Base-Emitter Saturation
Voltage vs Collector Current



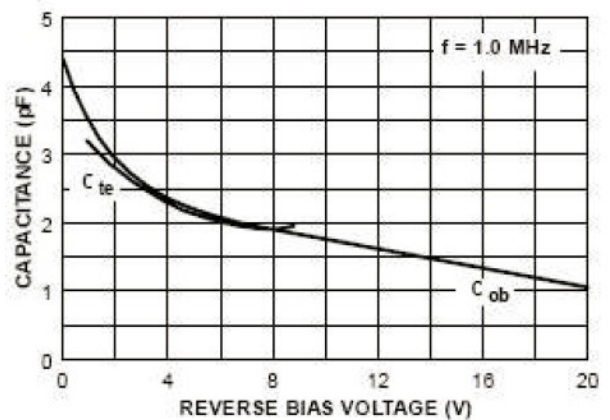
Base-Emitter ON Voltage vs
Collector Current



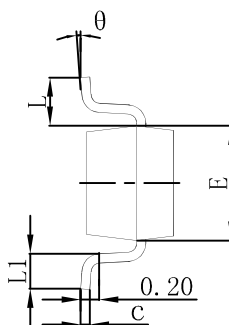
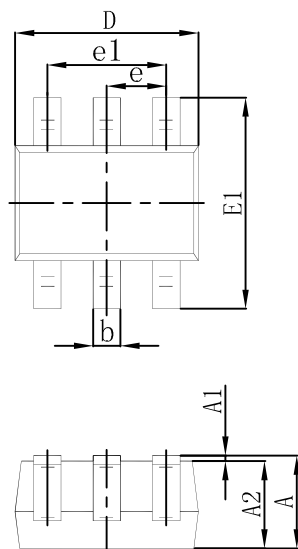
Collector-Cutoff Current
vs Ambient Temperature



Input and Output Capacitance
vs Reverse Bias Voltage

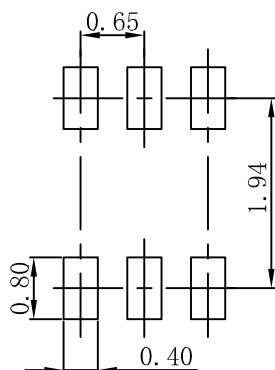


SOT-363 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.150	0.350	0.006	0.014
c	0.100	0.150	0.004	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.400	0.085	0.094
e	0.650 TYP		0.026 TYP	
e1	1.200	1.400	0.047	0.055
L	0.525 REF		0.021 REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°

SOT-363 Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.