



YOUSHANG SEMICONDUCTOR

设计研发新型功率器件

各类小信号开关

中低压及高压大电流等场效应管

0755-83047638

ysbdt@szyoushang.cn

www.szyoushang.cn



企业微信二维码



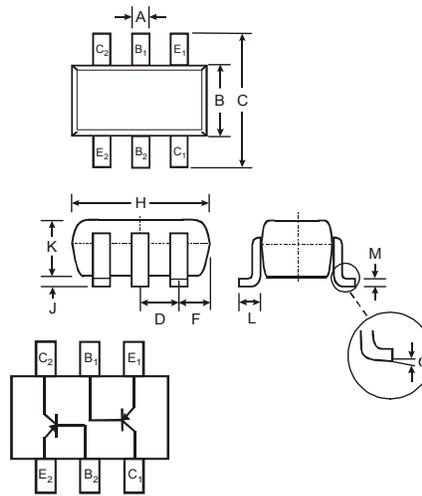
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Features

- Epitaxial Planar Die Construction
- Ideal for Low Power Amplification and Switching
- Ultra-Small Surface Mount Package

Mechanical Data

- Case: SOT-363
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Solderable per MIL-STD-202, Method 208
- Lead Free Plating (Matte Tin Finish annealed over Alloy 42 leadframe).
- Terminal Connections: See Diagram
- Marking Information: K2T – See Page 4
- Ordering & Date Code Information: See Page 4
- Weight: 0.006 grams (approximate)



SOT-363		
Dim	Min	Max
A	0.10	0.30
B	1.15	1.35
C	2.00	2.20
D	0.65 Nominal	
F	0.30	0.40
H	1.80	2.20
J	—	0.10
K	0.90	1.00
L	0.25	0.40
M	0.10	0.25
α	0°	8°
All Dimensions in mm		

Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	-40	V
Collector-Emitter Voltage	V_{CEO}	-40	V
Emitter-Base Voltage	V_{EBO}	-5.0	V
Collector Current - Continuous (Note 1)	I_C	-600	mA
Power Dissipation (Note 1, 2)	P_d	200	mW
Thermal Resistance, Junction to Ambient (Note 1)	$R_{\theta JA}$	625	$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	T_j, T_{STG}	-55 to +150	$^\circ\text{C}$

@T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Max	Unit	Test Condition
OFF CHARACTERISTICS (Note 6)					
Collector-Base Breakdown Voltage	V _{(BR)CBO}	-40	—	V	I _C = -100μA, I _E = 0
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	-40	—	V	I _C = -1.0mA, I _B = 0
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	-5.0	—	V	I _E = -100μA, I _C = 0
Collector Cutoff Current	I _{CEX}	—	-100	nA	V _{CE} = -35V, V _{EB(OFF)} = -0.4V
Base Cutoff Current	I _{BL}	—	-100	nA	V _{CE} = -35V, V _{EB(OFF)} = -0.4V
ON CHARACTERISTICS (Note 6)					
DC Current Gain	h _{FE}	30	—	—	I _C = -100μA, V _{CE} = -1.0V I _C = -1.0mA, V _{CE} = -1.0V I _C = -10mA, V _{CE} = -1.0V I _C = -150mA, V _{CE} = -2.0V I _C = -500mA, V _{CE} = -2.0V
		60	—		
		100	—		
		100	300		
		20	—		
Collector-Emitter Saturation Voltage	V _{CE(SAT)}	—	-0.40 -0.75	V	I _C = -150mA, I _B = -15mA I _C = -500mA, I _B = -50mA
Base-Emitter Saturation Voltage	V _{BE(SAT)}	-0.75	-0.95 -1.30	V	I _C = -150mA, I _B = -15mA I _C = -500mA, I _B = -50mA
SMALL SIGNAL CHARACTERISTICS					
Output Capacitance	C _{cb}	—	8.5	pF	V _{CB} = -10V, f = 1.0MHz, I _E = 0
Input Capacitance	C _{eb}	—	30	pF	V _{EB} = -0.5V, f = 1.0MHz, I _C = 0
Input Impedance	h _{ie}	1.5	15	kΩ	V _{CE} = -10V, I _C = -1.0mA, f = 1.0kHz
Voltage Feedback Ratio	h _{re}	0.1	8.0	x 10 ⁻⁴	
Small Signal Current Gain	h _{fe}	60	500	—	
Output Admittance	h _{oe}	1.0	100	μS	
Current Gain-Bandwidth Product	f _T	200	—	MHz	
SWITCHING CHARACTERISTICS					
Delay Time	t _d	—	15	ns	V _{CC} = -30V, I _C = -150mA, V _{BE(off)} = -2.0V, I _{B1} = -15mA
Rise Time	t _r	—	20	ns	V _{CC} = -30V, I _C = -150mA, I _{B1} = I _{B2} = -15mA
Storage Time	t _s	—	225	ns	
Fall Time	t _f	—	30	ns	

Notes: 6. Short duration pulse test used to minimize self-heating effect.

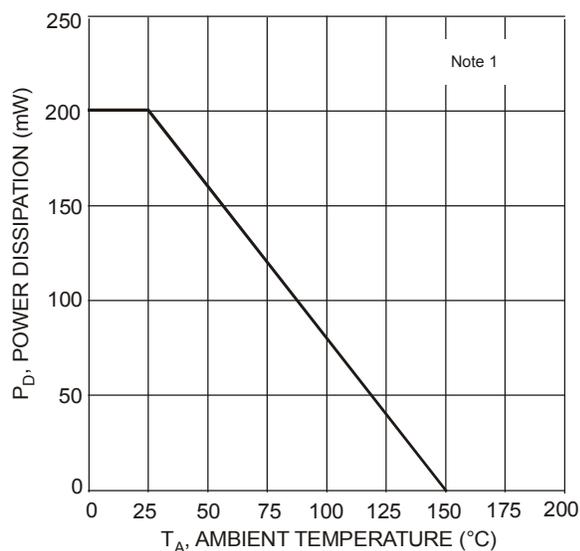


Fig. 1 Max Power Dissipation vs. Ambient Temperature

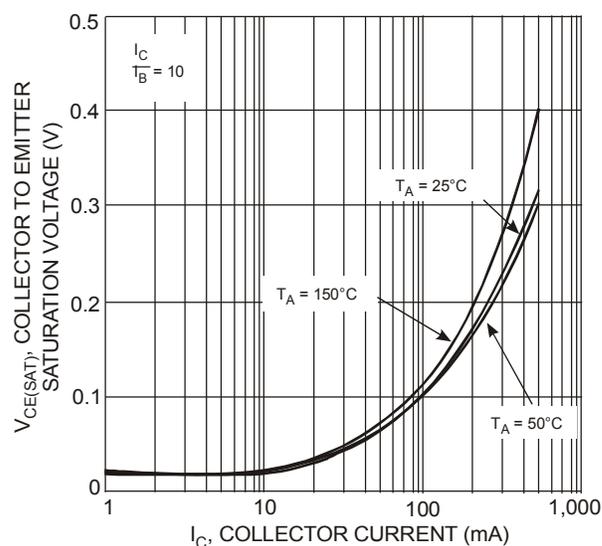


Fig. 2 Collector Emitter Saturation Voltage vs. Collector Current

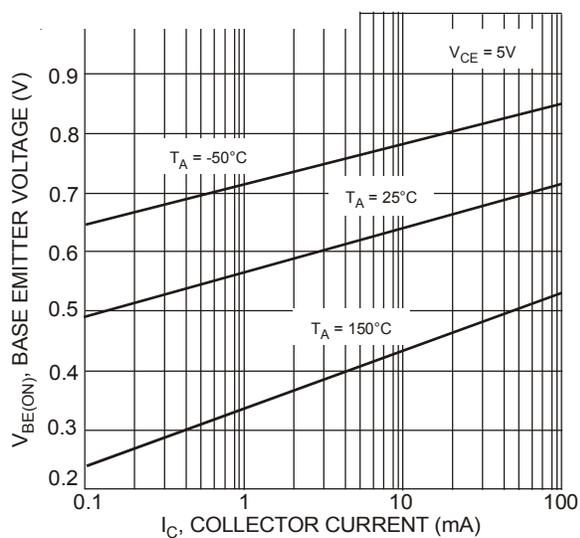


Fig. 3 Base-Emitter Voltage vs. Collector Current

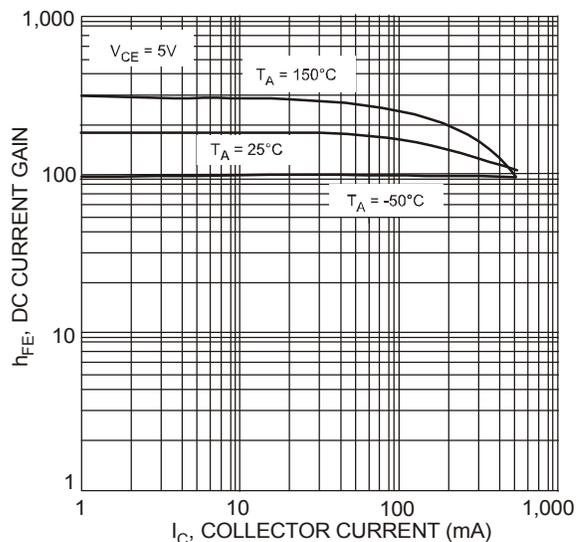


Fig. 4 DC Current Gain vs. Collector Current

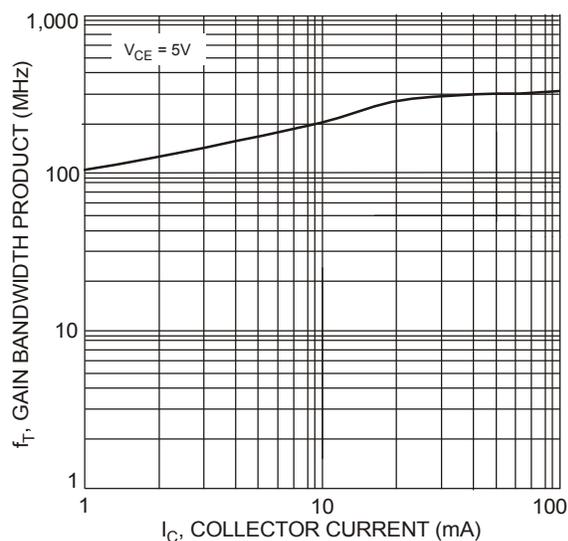


Fig. 5 Gain Bandwidth Product vs. Collector Current

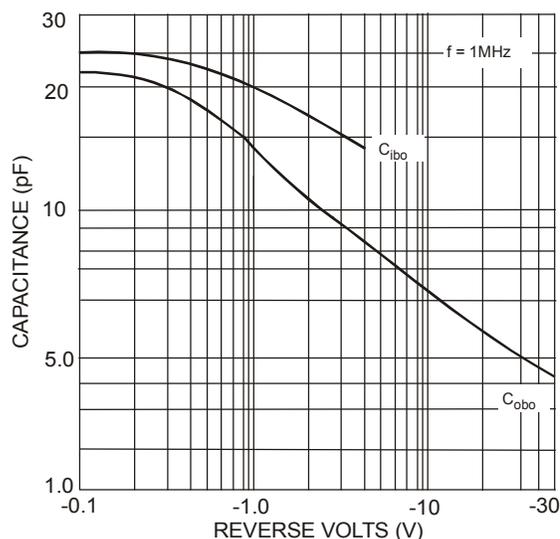


Fig. 6 Typical Capacitance

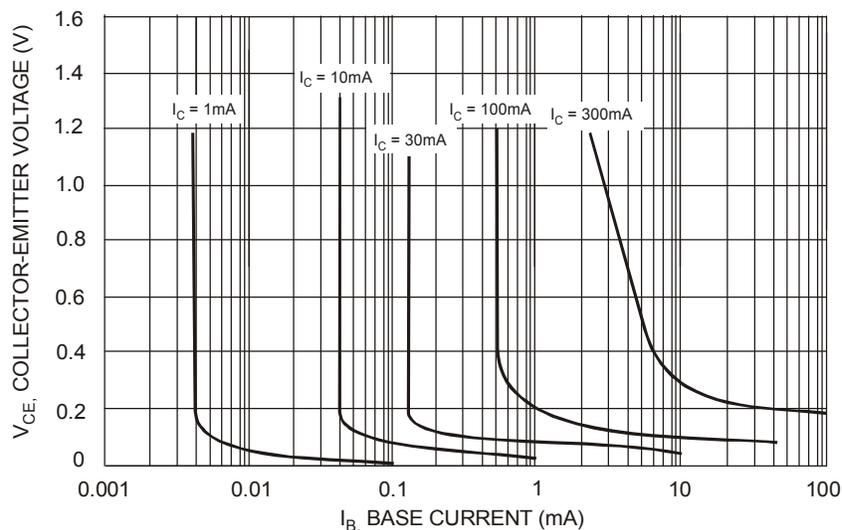


Fig. 7 Typical Collector Saturation Region