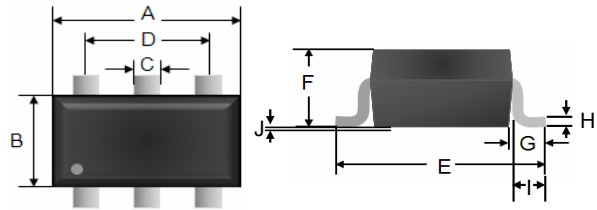


Small Signal Diode

SOT-363



Features

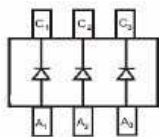
- ✧Fast switching speed
- ✧Low forward voltage drop
- ✧Moisture sensitivity level 1
- ✧Matte Tin(Sn) lead finish with Nickel(Ni) underplate
- ✧Pb free version and RoHS compliant
- ✧Green compound (Halogen free) with suffix "G" on packing code and prefix "G" on date code

Mechanical Data

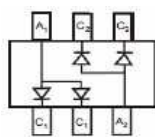
- ✧Case :SOT-363 small outline plastic package
- ✧Terminal: Matte tin plated, lead free., solderable per MIL-STD-202, Method 208 guaranteed
- ✧High temperature soldering guaranteed: 260°C/10s
- ✧Weight : 0.006 gram (approximately)
- ✧Marking Code : KLA,KL6,KL7,KL8,KLB

Dimensions	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	1.80	2.00	0.071	0.079
B	1.15	1.35	0.045	0.053
C	0.15	0.30	0.006	0.012
D	1.30 BSC		0.051 BSC	
E	2.10 BSC		0.083 BSC	
F	-	1.10	-	0.043
G	0.42		0.017	
H	0.1 BSC		0.004 BSC	
I	0.25	0.40	0.010	0.016
J	0.02	0.10	0.010	0.004

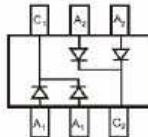
Pin Configuration



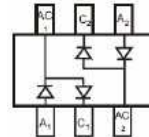
BAT54T



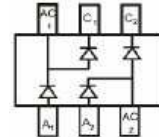
BAT54AD



BAT54CD



BAT54SD



BAT54BR

Ordering Information

Package	Part No.	Packing	Marking
SOT-363	BAT54T RF	3K / 7" Reel	KLA
SOT-363	BAT54AD RF	3K / 7" Reel	KL6
SOT-363	BAT54CD RF	3K / 7" Reel	KL7
SOT-363	BAT54SD RF	3K / 7" Reel	KL8
SOT-363	BAT54BR RF	3K / 7" Reel	KLB
SOT-363	BAT54T RFG	3K / 7" Reel	KLA
SOT-363	BAT54AD RFG	3K / 7" Reel	KL6
SOT-363	BAT54CD RFG	3K / 7" Reel	KL7
SOT-363	BAT54SD RFG	3K / 7" Reel	KL8
SOT-363	BAT54BR RFG	3K / 7" Reel	KLB

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Maximum Ratings

Type Number	Symbol	Value	Units
Peak Repetitive Peak reverse voltage	V_{RRM}	30	V
Working Peak Reverse Voltage	V_{RWM}		
DC Reverse Voltage	V_R		
Forward Continuous Current	I_F	200	mA
Repetitive Peak Forward Current	I_{FRM}	300	mA
Forward surge current @t<1.0s	I_{FSM}	600	mA
Power Dissipation	P_d	200	mW
Thermal resistance, junction to ambient air	$R_{\theta JA}$	625	°C/W
Operating and Storage temperature	T_J, T_{STG}	-65 to 150	°C

Small Signal Diode

Rating and Characteristic Curves

Fig.1 Forward Characteristics

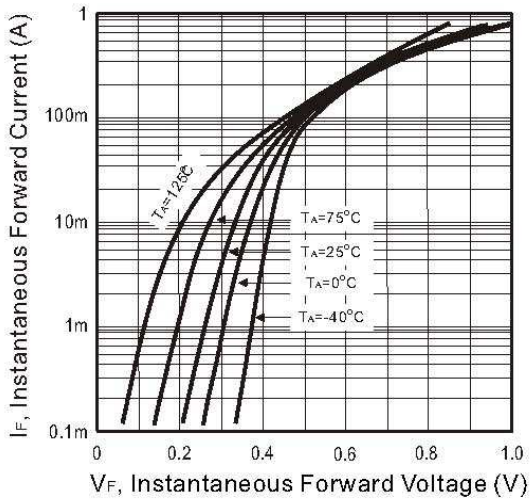


Fig.2 Reverse Characteristics

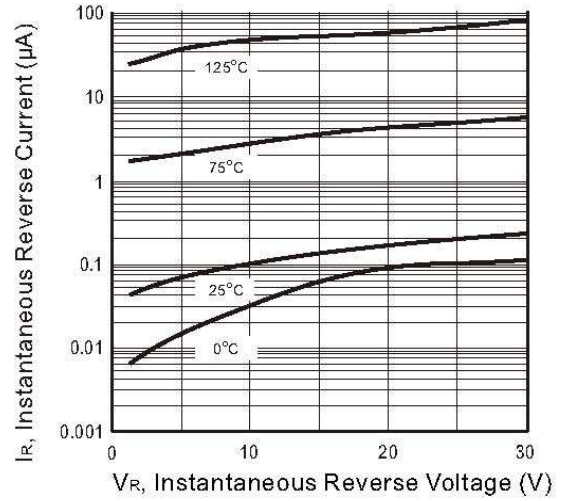


Fig.3 Capacitance Between Terminals Characteristics

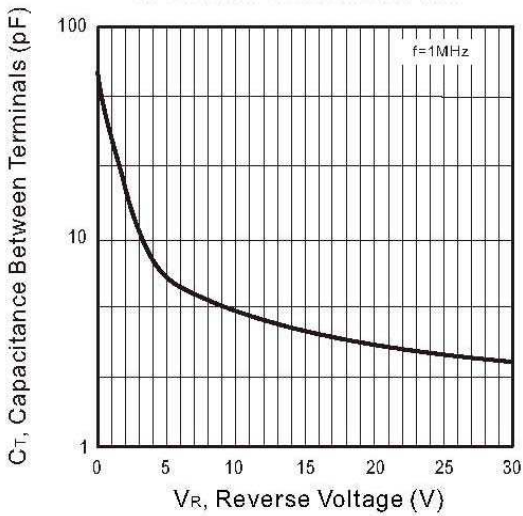
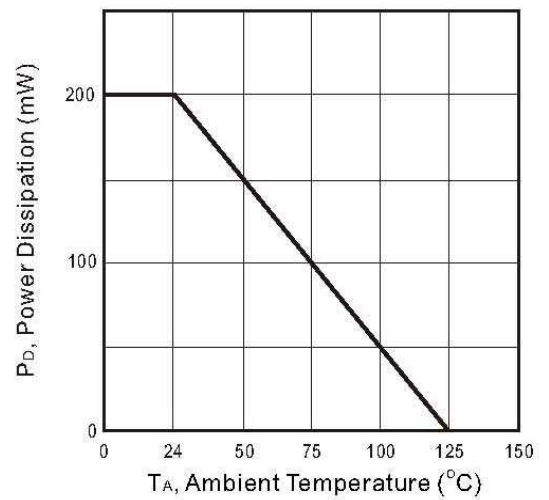


Fig.4 Power Derating Curve

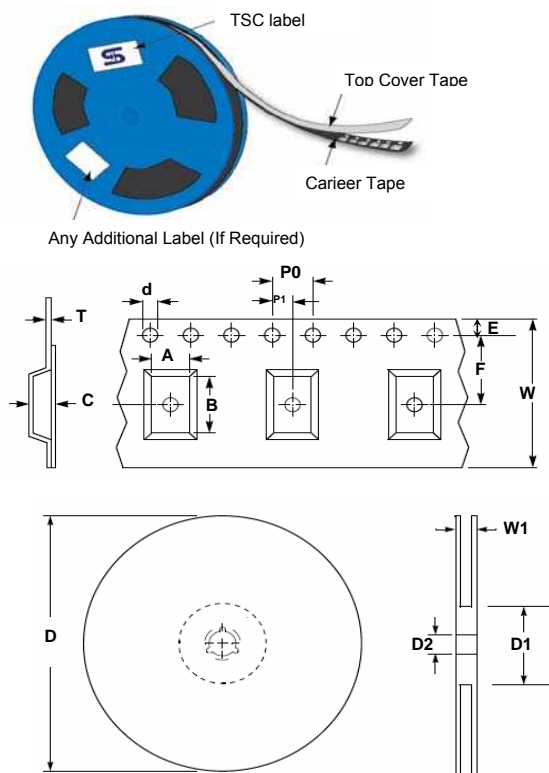


Small Signal Diode

Electrical Characteristics

Type Number		Symbol	Min	Max	Units
Reverse Breakdown Voltage	$I_R = 100\mu A$	$V_{(BR)}$	30	--	V
Forward Voltage	$I_F = 0.1mA$	V_F	--	0.24	V
	$I_F = 1mA$		--	0.32	V
	$I_F = 10mA$		--	0.40	V
	$I_F = 30mA$		--	0.50	V
	$I_F = 100mA$		--	1.00	V
Reverse current	$V_R = 25V$	I_R	--	2.0	μA
Total Capacitance	$V_R = 1V, f = 1.0MHz$	C_T	--	10	pF
Reverse Recovery Time	$I_F = I_R = 10mA, R_L = 100\Omega, I_{RR} = 1mA$	t_{rr}	--	5.0	nS

Tape & Reel specification



Item	Symbol	Dimension(mm)
Carrier width	A	3.15 ± 0.10
Carrier length	B	2.77 ± 0.10
Carrier depth	C	1.22 ± 0.10
Sprocket hole	d	1.50 ± 0.10
Reel outside diameter	D	178 ± 1
Reel inner diameter	D1	55 Min
Feed hole width	D2	13.0 ± 0.20
Sprocket hole position	E	1.75 ± 0.10
Punch hole position	F	3.50 ± 0.05
Sprocket hole pitch	P0	4.00 ± 0.10
Embossment center	P1	2.00 ± 0.05
Overall tape thickness	T	0.229 ± 0.013
Tape width	W	8.10 ± 0.20
Reel width	W1	12.30 ± 0.20

