

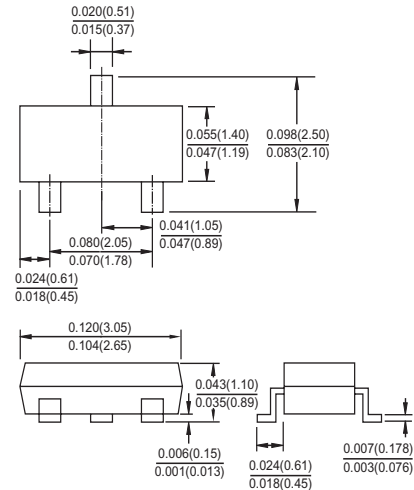


Features

- ✧ Low turn-on voltage
- ✧ Fast switching
- ✧ PN junction guard Ring for transient and ESD protection

Mechanical Data

- ✧ Case: SOT-23, Molded plastic
- ✧ Terminals: Solderable per MIL-STD-202, Method 208
- ✧ Marking & Polarity: See diagram
- ✧ Weight: 0.008 grams



Dimensions in inches and (millimeters)



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

Type Number	Symbol	BAS70	Units
Peak Repetitive Reverse Voltage	VRRM	70	V
Working Peak Reverse Voltage	VRWM	70	V
DC Blocking Voltage	VR	70	V
RMS Reverse Voltage	VR(RMS)	49	V
Forward Continuous Current (Note 1)	IF	70	mA
Non-Repetitive Peak Forward Surge Current @ $t \leq 1.0\text{s}$	IFSM	100	mA
Power Dissipation (Note 1)	Pd	200	mW
Thermal Resistance Junction to Ambient Air (Note 1)	$R_{\theta JA}$	625	K/W
Operating Junction Temperature Range	T_J	-55 to +125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 to +150	$^\circ\text{C}$

Electrical Characteristics

Type Number	Symbol	Min	Max	Units
Reverse Breakdown Voltage (Note 2), $I_R=10\mu\text{A}$	V(BR)	70		
Reverse Leakage Current $t_p<300\mu\text{s}$, $V_R=50\text{V}$	I_R	—	100	nA
Forward Voltage Drop $t_p=300\mu\text{s}$, $I_F=1.0\text{mA}$ $t_p<300\mu\text{s}$, $I_F=15\text{mA}$	V_F	—	410 1000	mV
Junction Capacitance $V_R=0$, $f=1.0\text{MHz}$	C_j	—	2.0	pF
Reverse Recovery Time (Note 3)	t_{rr}	—	5.0	nS

- Notes:
- Valid Provided that Terminals are Kept at Ambient Temperature.
 - Test Period $< 3000\mu\text{s}$.
 - Reverse Recovery Test Conditions: $I_F=I_R=10\text{mA}$, $I_{rr}=1.0\text{mA}$, $R_L=100\Omega$.

RATINGS AND CHARACTERISTIC CURVES (BAS70 / -04 / -05 / -06)

FIG.1- POWER DERATING CURVE

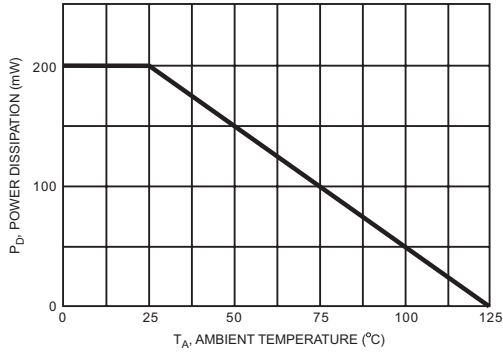


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

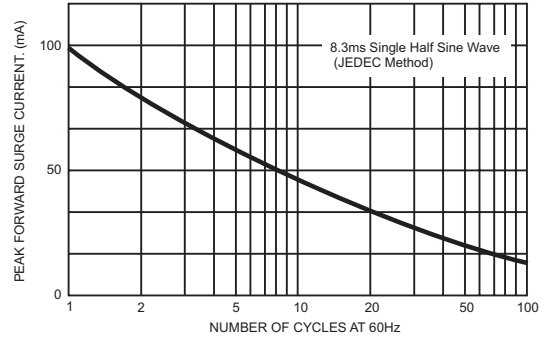


FIG.3- TYPICAL FORWARD CHARACTERISTICS

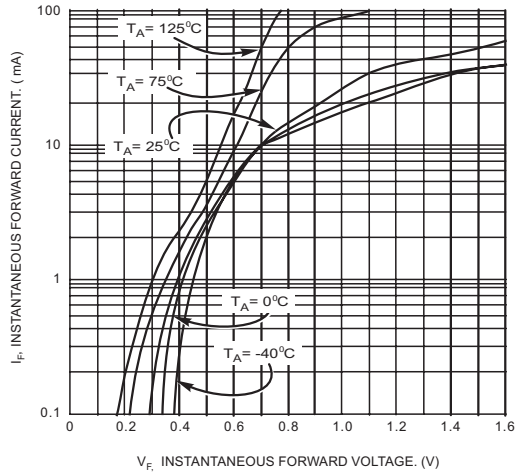


FIG.4- TYPICAL REVERSE CHARACTERISTICS

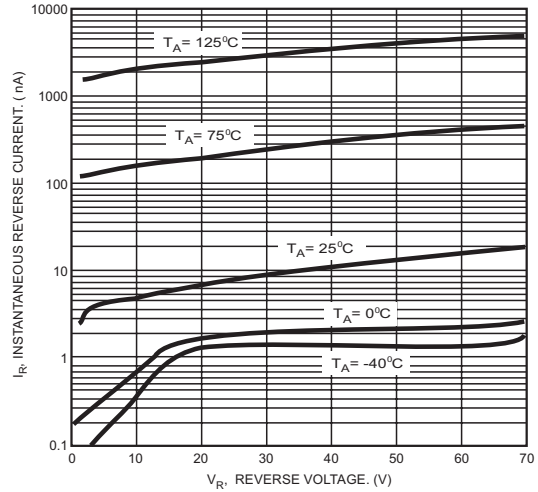


FIG.5- TYPICAL TOTAL CAPACITANCE VS REVERSE VOLTAGE

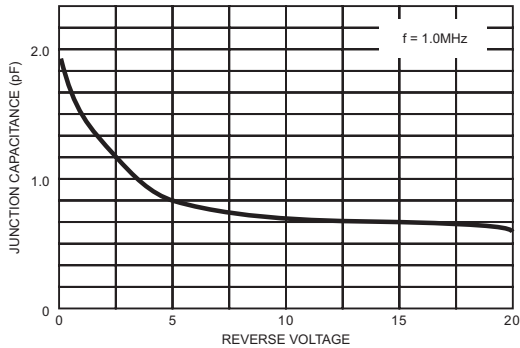
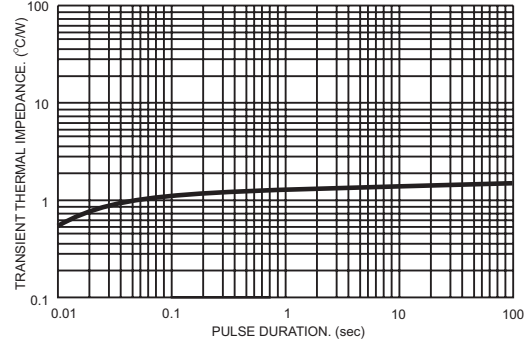
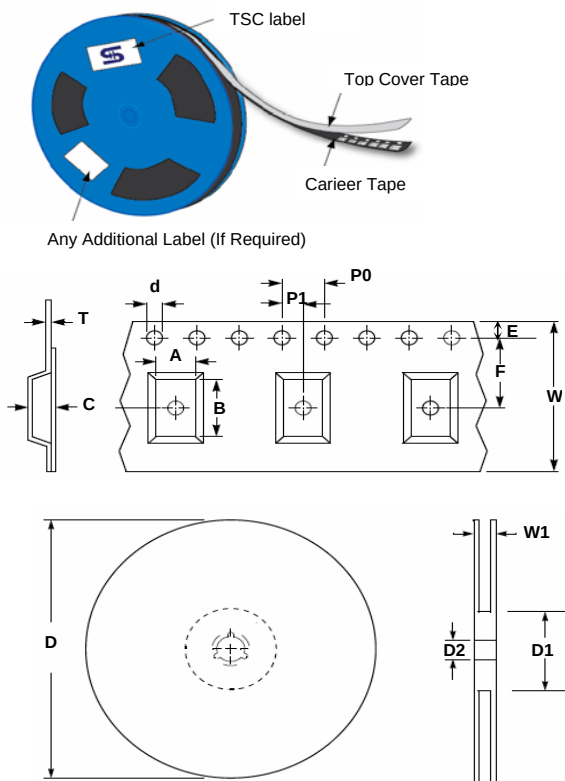


FIG.6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS



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	1.5 ± 0.1
Reel outside diameter	D	178 ± 1
Reel inner diameter	D1	54 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	0.22 ± 0.05
Tape width	W	8.00 ± 0.20
Reel width	W1	12 Max

