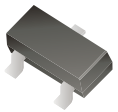
SMD Switching Diode

ABAV70W-HF

RoHS Device
Halogen Free



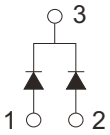
Features

- Extreme fast switches.
- Low leakage current.
- Small surface-mount package.
- AEC-Q101 Qualified.

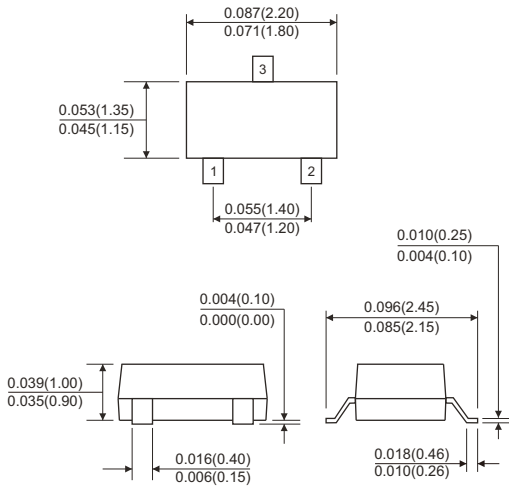
Mechanical data

- Case: SOT-323, molded plastic.
- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102.
- Mounting position: Any.

Circuit Diagram



SOT-323



Dimensions in inches and (millimeter)

Maximum Rating (at Ta=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Repetitive peak reverse voltage	V_{RRM}	75	V
Reverse voltage	V_R	75	V
Average forward current (Note 1)	Io	150	mA
Non-repetitive peak forward surge current @ t = 8.3ms	I_{FSM}	2	A
Power dissipation (Note 1, 2)	P_D	200	mW
Thermal resistance junction to ambient (Note 2)	$R_{\theta JA}$	625	°C/W
Operating junction temperature range	T_j	-55 to +150	°C
Storage temperature range	T_{STG}	-55 to +150	°C

Notes: 1. Single diode loaded.
2. Device mounted on an FR4 PCB (1.0x1.0x0.06 inch), single-sided copper, tin-plated and standard footprint.

Electrical Characteristics (at Ta=25°C unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Forward voltage	V_F	I_F = 1mA I_F = 10mA I_F = 50mA I_F = 150mA			0.715 0.855 1.000 1.250	V
Reverse current	I_R	V_R = 75V			1	μA
Reverse breakdown voltage	V_{BR}	I_R = 100μA	100			V
Diode capacitance	C_J	V_R = V_F = 0V, f = 1MHz			2	pF
Reverse recovery time	t_{rr}	I_F = 10mA, I_{rr} = 0.1 x I_R, R_L = 100Ω			4	nS

Typical Rating and Characteristic Curves (ABAV70W-HF)

Fig.1 - P_D — T_A

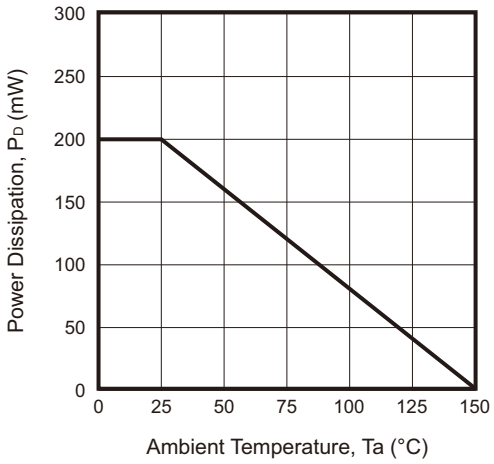


Fig.2 - Capacitance Characteristics

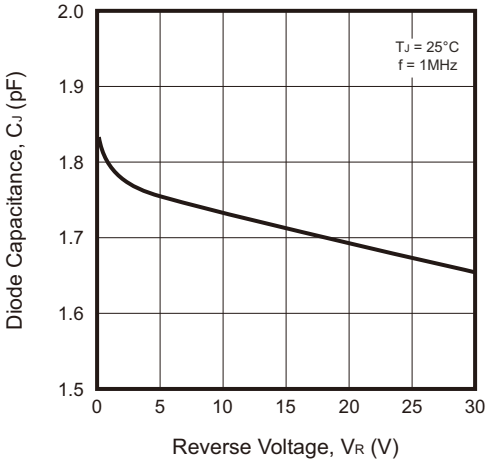


Fig.3 - Forward Characteristics

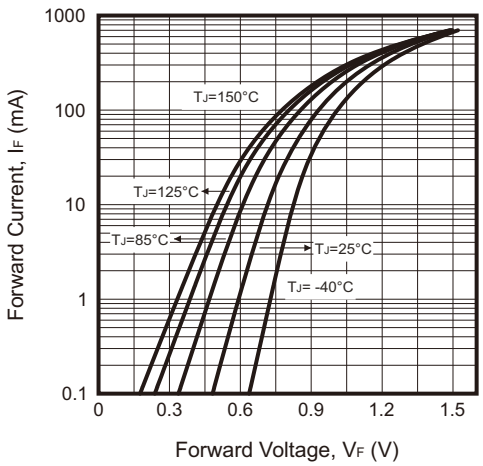
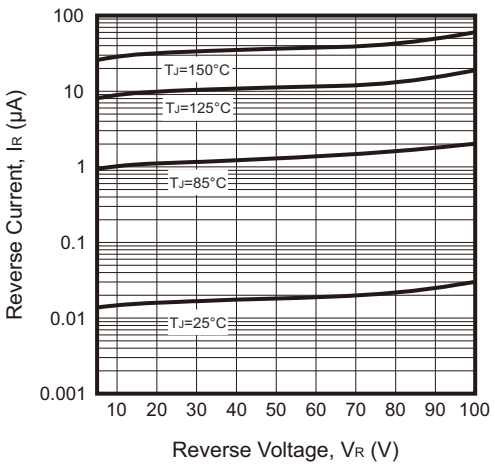
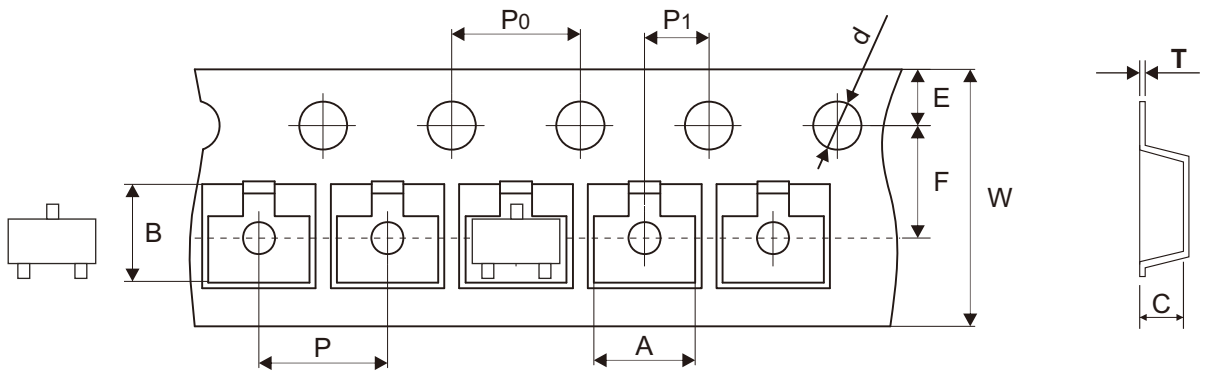
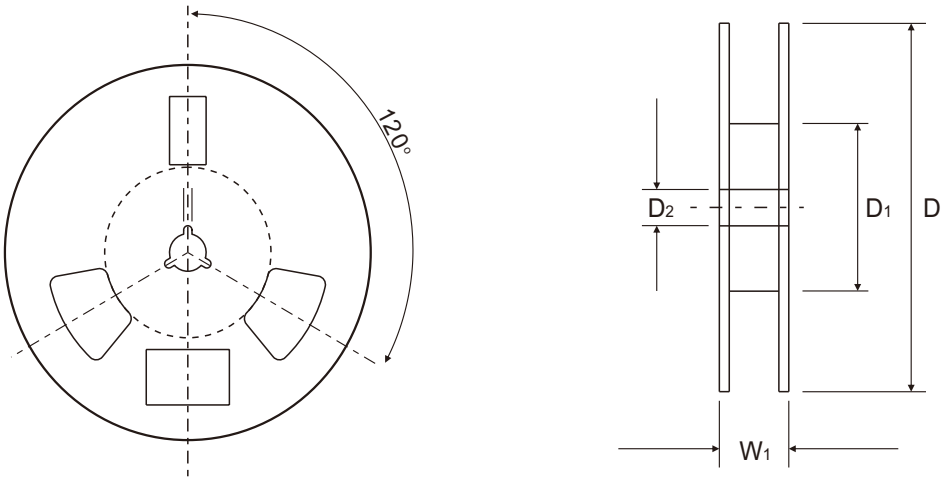


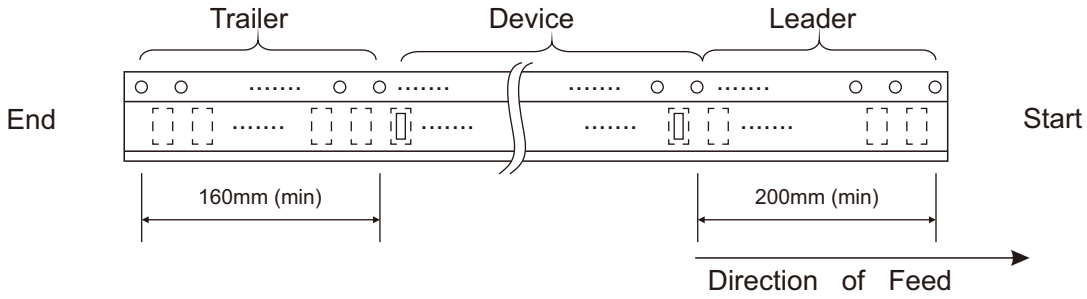
Fig.4 - Reverse Characteristics



Reel Taping Specification





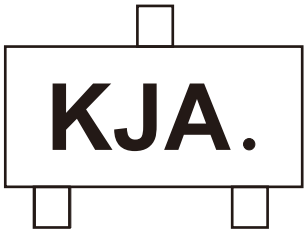


	SYMBOL	A	B	C	d	D	D1	D2
SOT-323	(mm)	2.25 ± 0.10	2.55 ± 0.10	1.19 ± 0.10	1.50 + 0.10 − 0.00	178.00 ± 2.00	54.40 ± 1.00	13.00 ± 1.00
	(inch)	0.089 ± 0.004	0.100 ± 0.004	0.047 ± 0.004	0.059 + 0.004 − 0.000	7.008 ± 0.079	2.142 ± 0.039	0.512 ± 0.039

	SYMBOL	E	F	P	P0	P1	T	W	W1
SOT-323	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	0.25 ± 0.02	8.00 + 0.30 − 0.10	12.30 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.010 ± 0.001	0.315 + 0.012 − 0.004	0.484 ± 0.039

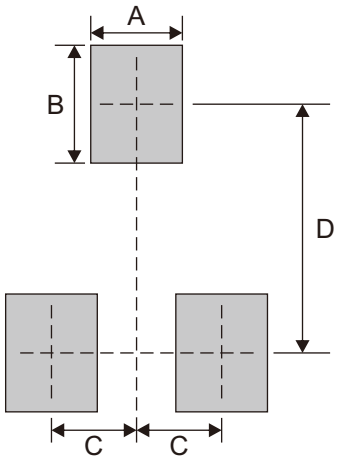
Marking Code

Part Number	Marking Code
ABAV70W-HF	KJA.



Suggested P.C.B. PAD Layout

SIZE	SOT-323	
	(mm)	(inch)
A	0.70	0.028
B	0.90	0.035
C	0.65	0.026
D	1.90	0.075



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
SOT-323	3,000	7