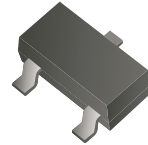


BAS40W-xx-P2-HF Series

RoHS Device
Halogen Free



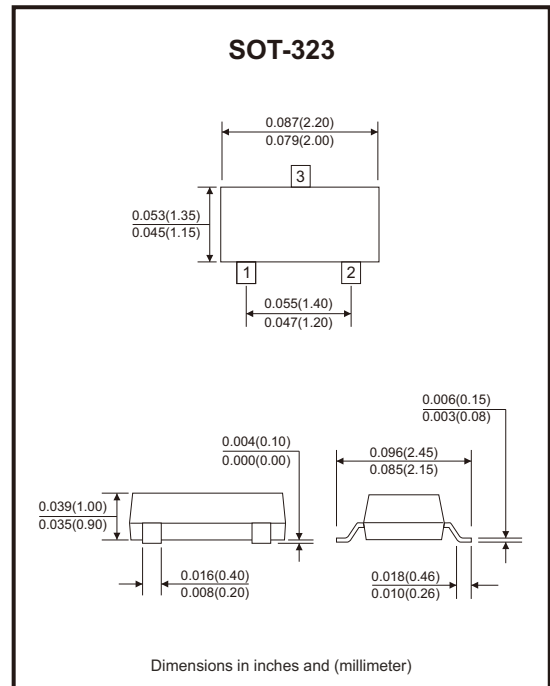
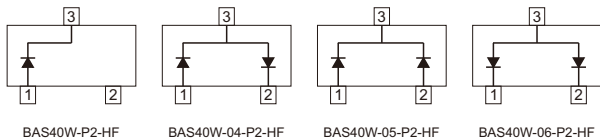
Features

- Small outline surface mount package.
- Low current leakage.
- For high-speed switching applications.

Mechanical data

- Case: SOT-323, molded plastic.
- Terminals: Solderable per MIL-STD-750, method 2026.
- Mounting position: Any.

Circuit Diagram



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

Parameter	Symbol	Value	Unit
Peak repetitive reverse voltage	V_{RRM}	40	V
Working peak reverse voltage	V_{RWM}	40	V
DC blocking voltage	V_R	40	V
Forward continuous current	I_o	200	mA
Non-repetitive peak forward current @ 8.3ms single half sine-wave	I_{FSM}	2	A
Power dissipation	P_D	200	mW
Thermal resistance junction to ambient	$R_{\theta JA}$	500	°C/W
Junction temperature range	T_J	125	°C
Storage temperature range	T_{STG}	-55 to +150	°C

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Reverse breakdown voltage	$I_R = 10\mu A$	V_{BR}	40			V
Reverse voltage leakage current	$V_R = 30V$	I_R			200	nA
Forward voltage	$I_F = 1mA$	V_F			380	mV
	$I_F = 40mA$	V_F			1000	
Junction capacitance	$V_R = 0V, f = 1MHz$	C_J			5	pF
Reverse recovery time	$I_{rr} = 1mA, I_R = I_F = 10mA, R_L = 100\Omega$	t_{rr}			5	ns

Typical Rating and Characteristic Curves (BAS40W-xx-P2-HF)

Fig.1 - Forward Characteristics

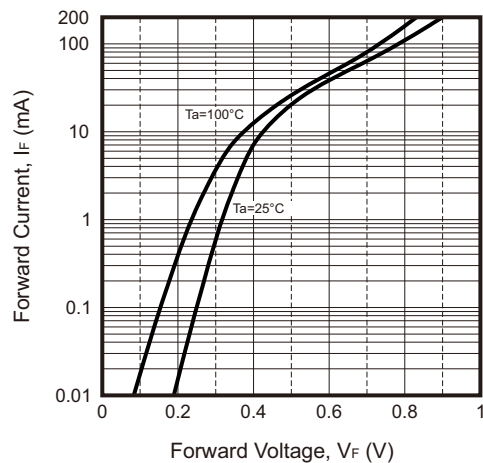


Fig.2 - Reverse Characteristics

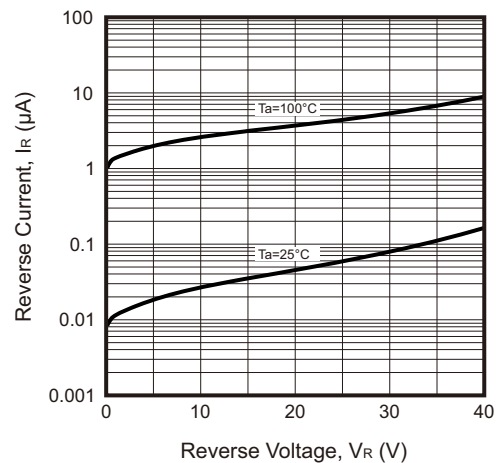


Fig.3 - Capacitance Characteristics

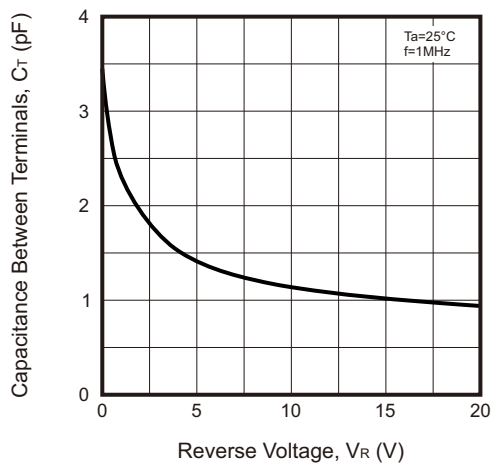
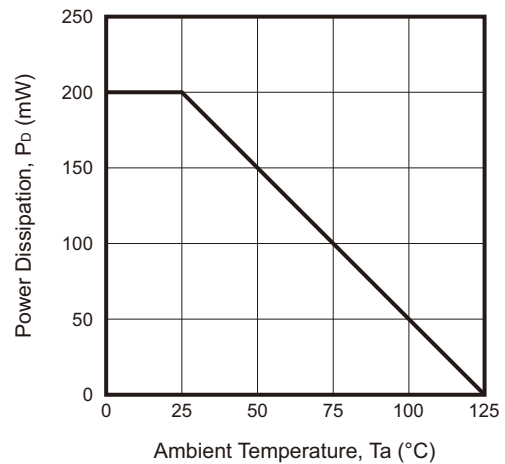
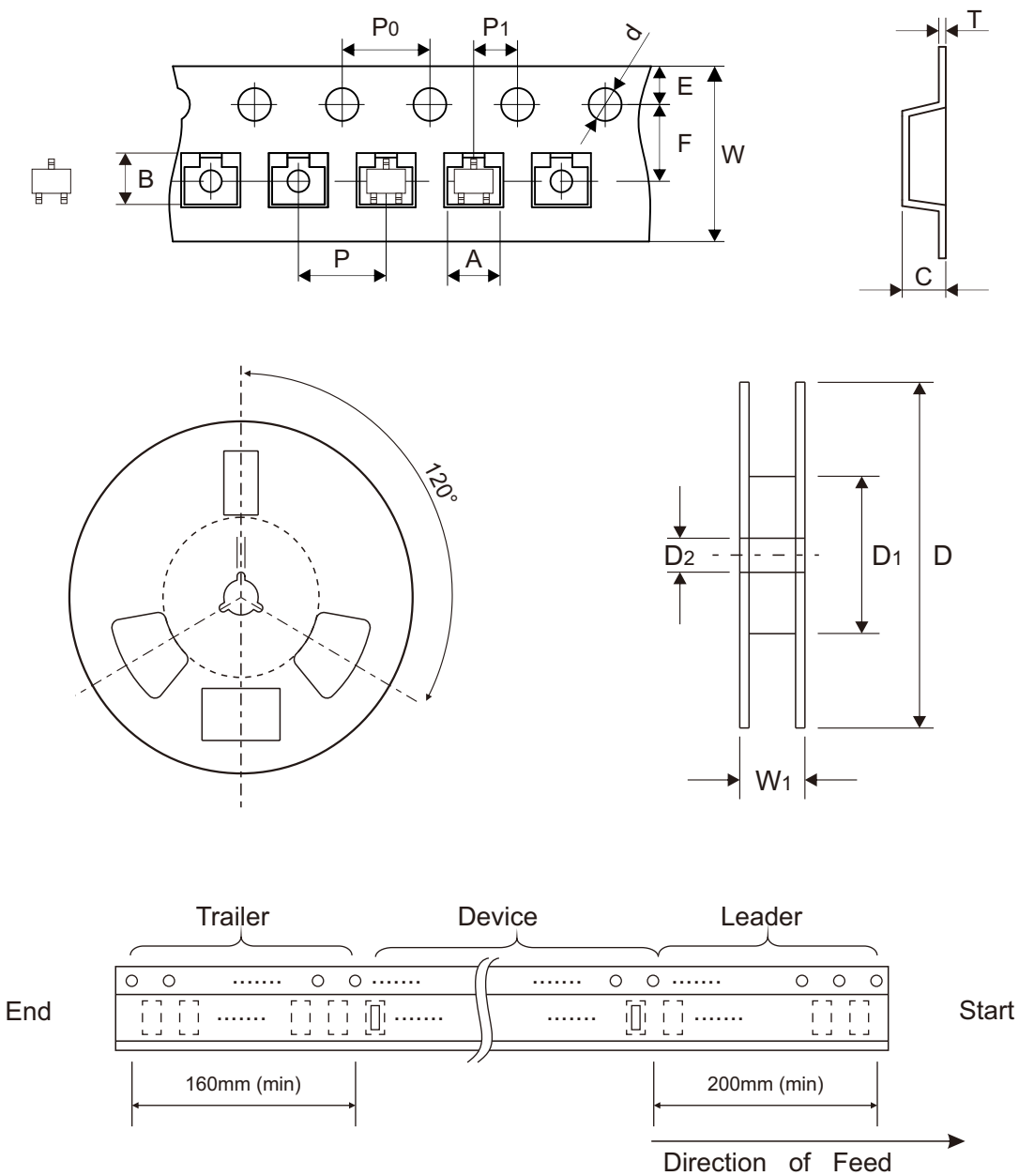


Fig.4 - Power Derating Curve



Reel Taping Specification

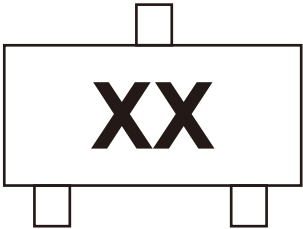


SOT-323	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	2.25 ± 0.10	2.55 ± 0.10	1.19 ± 0.10	1.50 + 0.10 - 0.00	178.00 ± 2.00	50.00 ± 0.50	13.00 ± 0.25
	(inch)	0.089 ± 0.004	0.100 ± 0.004	0.047 ± 0.004	0.059 + 0.004 - 0.000	7.008 ± 0.079	1.969 ± 0.020	0.512 ± 0.010

SOT-323	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	0.20 ± 0.02	8.00 + 0.30 - 0.10	12.10 ± 1.50
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.008 ± 0.001	0.315 + 0.012 - 0.004	0.476 ± 0.059

Marking Code

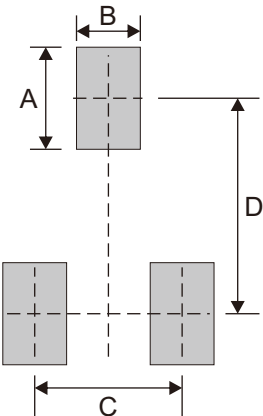
Part Number	Marking Code
BAS40W-P2-HF	43
BAS40W-04-P2-HF	44
BAS40W-05-P2-HF	45
BAS40W-06-P2-HF	46



xx = Product type marking code

Suggested P.C.B. PAD Layout

SIZE	SOT-323	
	(mm)	(inch)
A	0.80	0.031
B	0.50	0.020
C	1.30	0.051
D	2.20	0.087



Standard Packaging

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