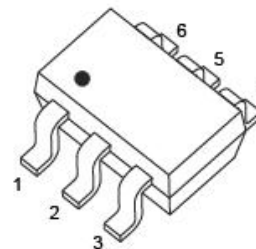


SOT-363 Plastic-Encapsulate Diodes

Small-Signal Fast Switching Diodes

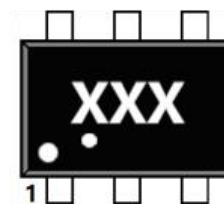
V_R	I_O	$V_{F_{max}}$	T_{jmax}
40V	200mA	1.0V@ $I_F=40mA$	125°C



Features

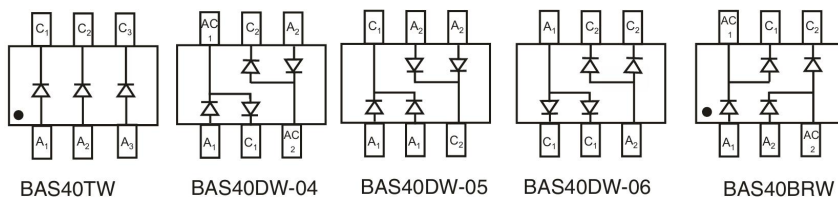
- SOT-363 Package
- Epoxy meets UL-94 V-0 flammability rating and halogen free
- Moisture Sensitivity Level 3
- High temperature soldering guaranteed 260°C/10seconds

at terminals



Application

- Extreme fast switches
- Automotive



Package Marking and Ordering Information

Product ID	Package	Marking	Qty(PCS)
BAS40TW	SOT-363	K43	3000
BAS40DW-04	SOT-363	K44	3000
BAS40DW-05	SOT-363	K45	3000
BAS40DW-06	SOT-363	K46	3000
BAS40BRW	SOT-363	K47	3000

Absolute Maximum Ratings (Ta=25°C unless otherwise noted)

Parameter	Symbols	Value	Units
Non-Repetitive Peak reverse voltage	VRM	40	V
DC Blocking Voltage	VR	40	V
Average Rectified Output Current	IO	200	mA
Power Dissipation	PD	200	mW
Typical thermal resistance	RθJA	500	°C/W
Junction Temperature	Tj	-40-+125	°C
Storage temperature range	TSTG	-50-+150	°C

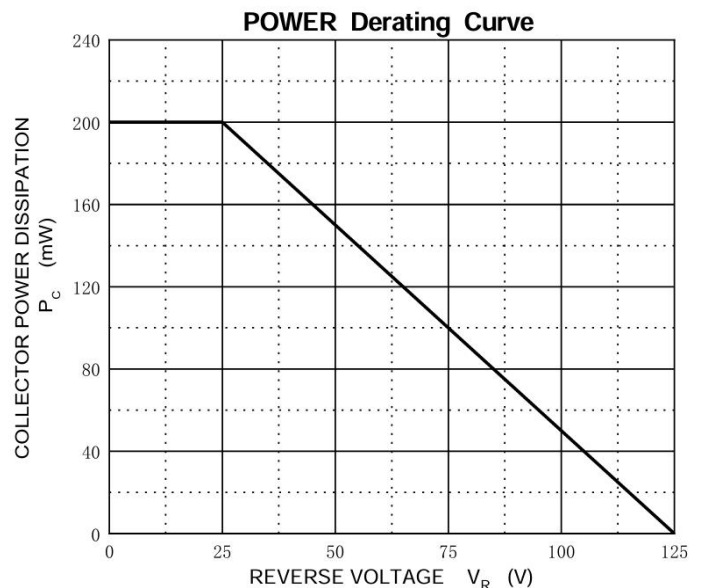
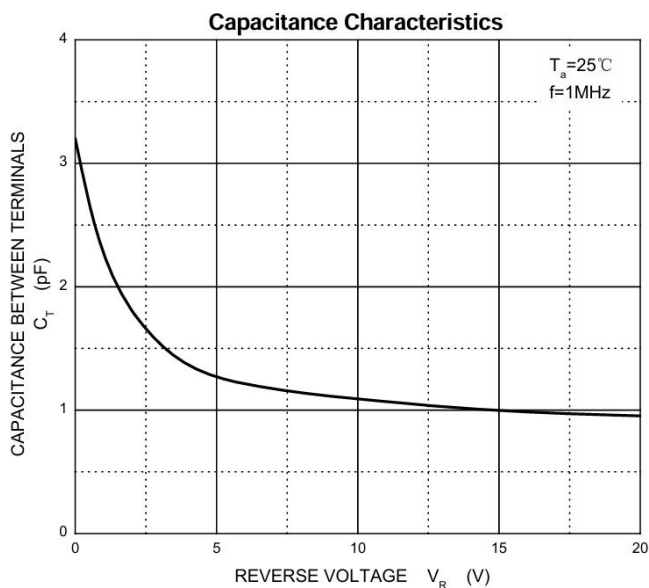
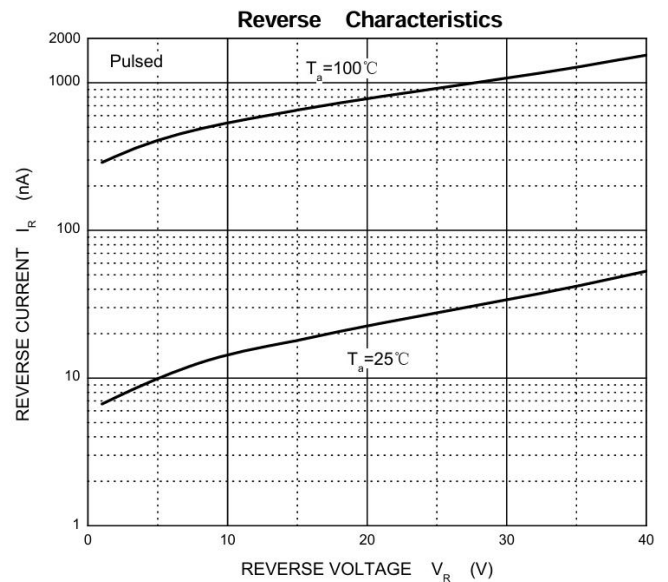
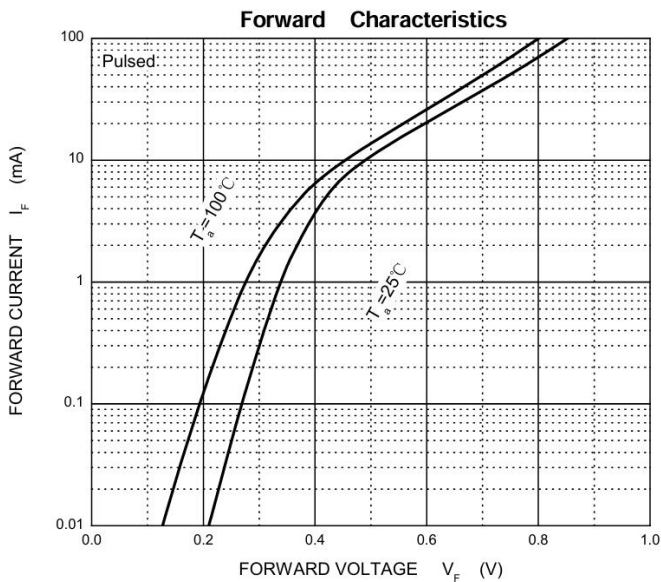
BAS40TW/BAS40DW-04-05-06/BAS40BRW

Small-Signal Fast Switching Diodes

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

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Maximum reverse breakdown voltage	VR	IR=10uA	40			V
Maximum forward voltage	VF1	IF = 1mA			380	mV
	VF2	IF = 40mA			1000	
Maximum reverse current	IR	VR=30V			200	nA
Type junction capacitance	CT	VR = 0V, f = 1MHz			5	pF
Reverse Recovery time	trr	IF=IR=10mA Irr=1mA, RL=100Ω			5	ns

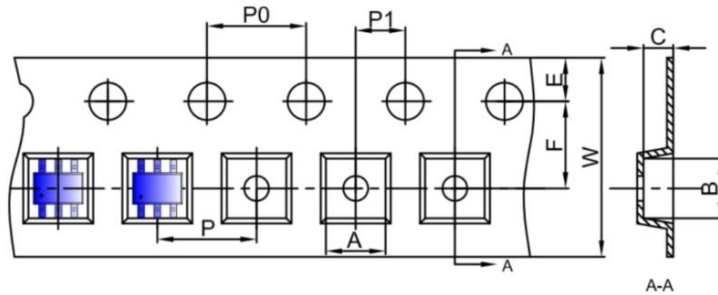
Typical Characteristics



BAS40TW/BAS40DW-04-05-06/BAS40BRW

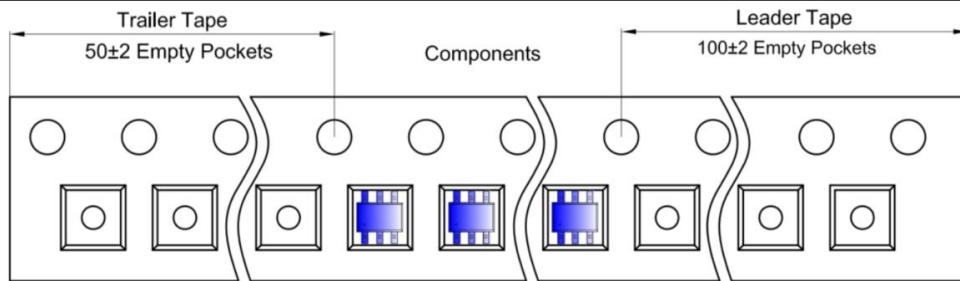
Small-Signal Fast Switching Diodes

Carrier Dimension(mm)

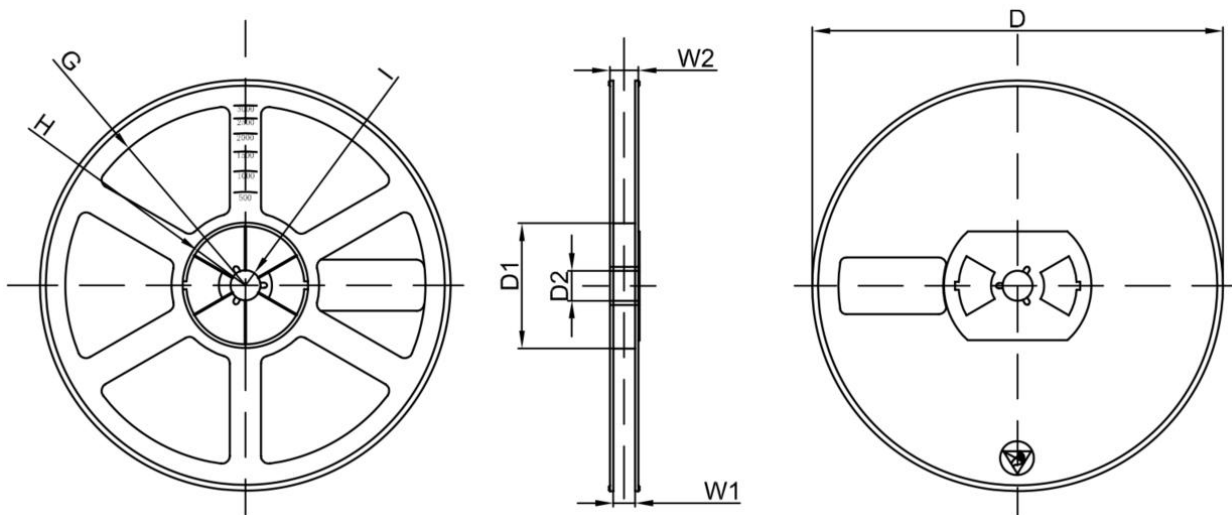


Dimensions are in millimeter

Pkg Type	A	B	C	d	E	F	P0	P	P1	W
SOT-363	2.25	2.55	1.20	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00



Reel Dimension(mm)



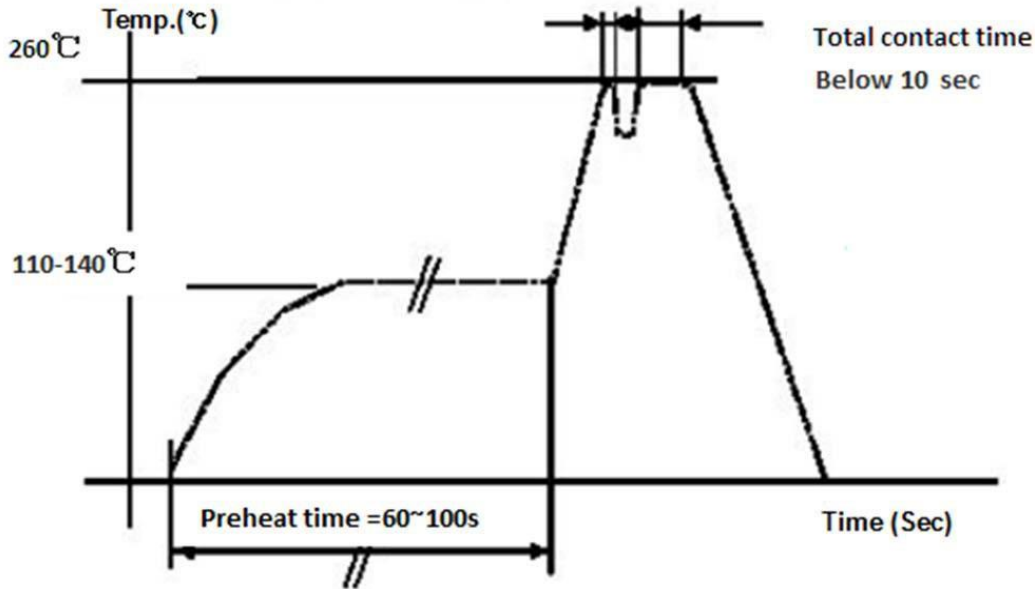
Reel Option	D	D1	D2	G	H	I	W1	W2
7" Dia	Φ178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30
Tolerance	±2	±1	±1	±1	±1	±1	±1	±1

Package Specifications

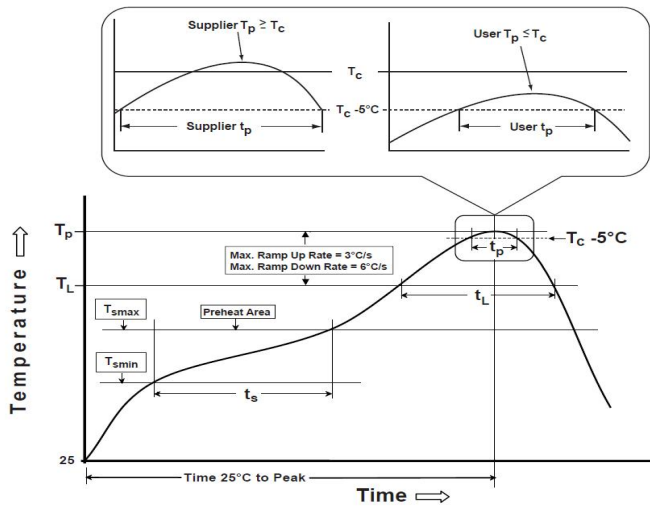
Package	Reel Size	Reel DIA. (mm)	Q'TY/Reel (Kpcs)	Box Size (mm)	QTY/Box (Kpcs)	Carton Size (mm)	Q'TY/Carton (Kpcs)
SOT363	7'	178	3	210*208*203	45	440*400*230	180

Recommended Soldering Profile for Rectifier Diodes (Pb Free)

a) Wave Soldering Profile



b) Reflow Soldering Profile (Pb Free Application), refer to IPC/JEDEC J-STD-020



Preheat/Soak Temperature Min (T _{smin}) Temperature Max (T _{smax}) Time (t _s) from (T _{smin} to T _{smax})	50 °C 200 °C 60-120 seconds
Melting Point of Solder (Sn Ag Cu)	217°C
Ramp-up Rate to 217°C(Melting Point of Solder)	3°C/sec
Time at Temp.>217°C (Melting Point of Solder)	60~150 Sec
Peak Temperature	255±5°C
Time within 5°Cbelow Peak Temp.	20~40 Sec
Cooling Rate	6°C/sec (max)
Time from 25°C to Peak Temp.	8min (max)

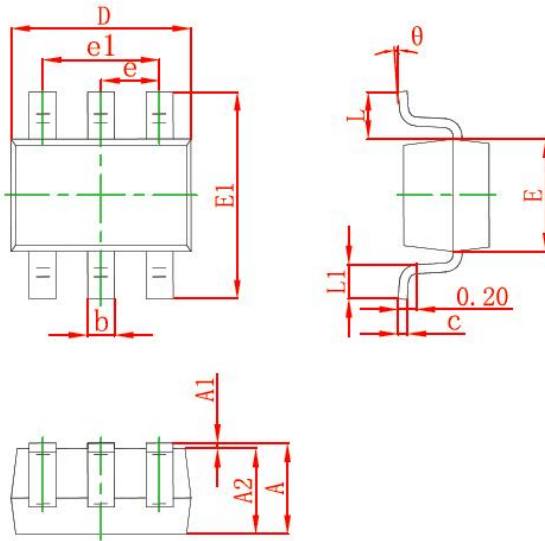
c) Manual Soldering

When using an electric soldering iron for manual soldering, it is recommended that the temperature does not exceed 300°C and the soldering time is less than 10 seconds.

BAS40TW/BAS40DW-04-05-06/BAS40BRW

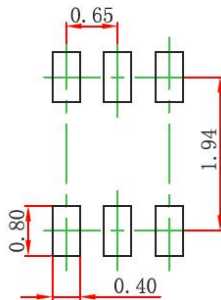
Small-Signal Fast Switching Diodes

Package Mechanical Data



Symbol	Dimensions in Millimeters	
	Min	Max
A	0.900	1.100
A1	0.000	0.100
A2	0.900	1.000
b	0.150	0.350
c	0.100	0.150
D	2.000	2.200
E	1.150	1.350
E1	2.150	2.400
e	0.650 TYP	
e1	1.200	1.400
L	0.525 REF	
L1	0.260	0.460
θ	0°	8°

Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.