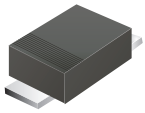
CDBAS140-HF

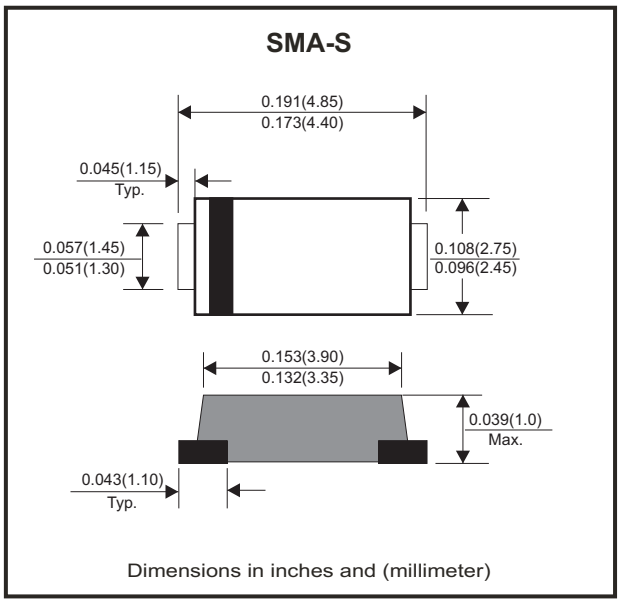
Reverse Voltage: 40 Volts

Forward Current: 1.0 Amp

RoHS Device

Halogen Free





Features

- For surface mount applications
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency.
- High current capability, low forward voltage drop.
- For use in low voltage, high efficiency inverters, free wheeling, and polarity protection applications

Mechanical data

- Epoxy: UL94-V0 rate flame retardant.
- Case: Molded plastic, SMA-S
- Terminals: Solderable per MIL-STD-750, Method 2026.
- Polarity: Color band denotes cathode end
- Mounting Position: Any

Circuit diagram

Maximum Ratings (at T_A=25°C unless otherwise noted)

Parameter	Conditions	Symbol	MIN.	TYP.	MAX.	Unit
Recurrent peak reverse voltage		V_{RRM}			40	V
DC blocking voltage		V_{DC}			40	V
RMS voltage		V_{RMS}			28	V
Average forward rectified current	0.2x0.2”(5.0x5.0mm) copper pad area, see figure 1	I_{AV}			1.0	A
Peak forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC method)	I_{FSM}			30	A
Operating Temperature range		T_J	-50		+150	°C
Storage temperature range		T_{STG}	-50		+150	°C

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

Parameter	Conditions	Symbol	MIN.	TYP.	MAX.	Unit
Maximum forward voltage at 1.0A	300μS pulse width 1% duty cycle	V_F			0.50	V
Maximum DC reverse current at rated DC blocking voltage	V_R =V_{RRM} T_A=25°C	I_R			0.5	mA
	V_R =V_{RRM} T_A=100°C	I_R			10	mA
Thermal Resistance (Note.1)	Junction to ambient	$R_{\theta JA}$		50		°C/W
	Junction to lead	$R_{\theta JL}$		20		°C/W
Diode Junction capacitance	f=1MHz and applied 4V DC reverse Voltage	C_J		110		pF

Note: 1. Thermal resistance from junction to ambient and from junction to lead P.C.B. mounted on 0.2x0.2”(5.0x5.0mm) cpper pad areas.

RATING AND CHARACTERISTIC CURVES (CDBAS140-HF)

Fig.1 - Forward Current Derating Curve

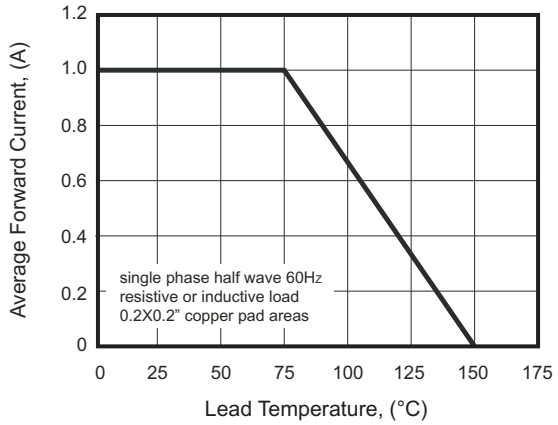


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

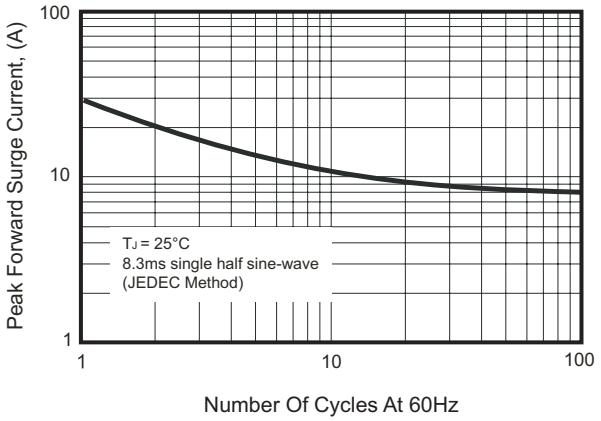


Fig. 3 - Typical Instantaneous Forward Characteristics

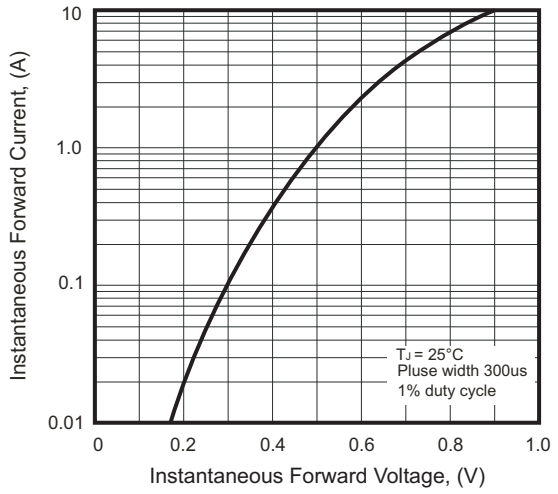


Fig. 4 - Typical Reverse Characteristics

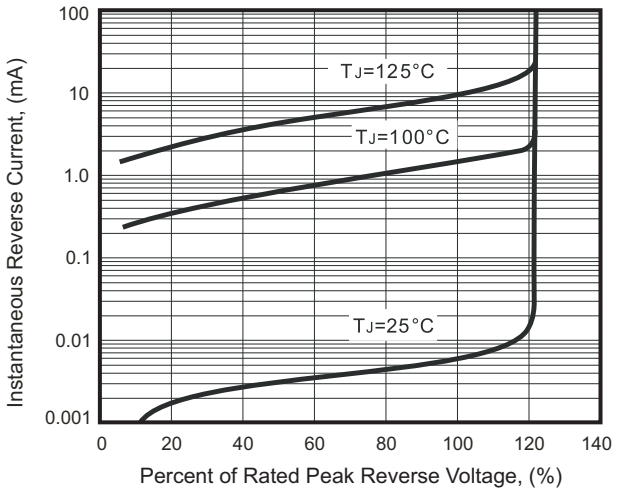
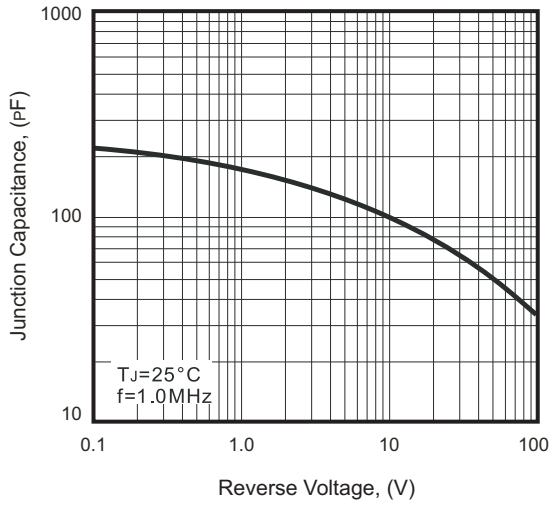
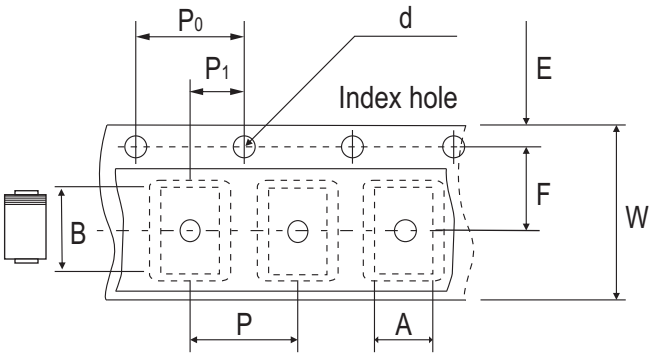
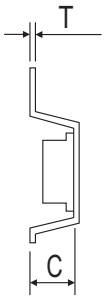


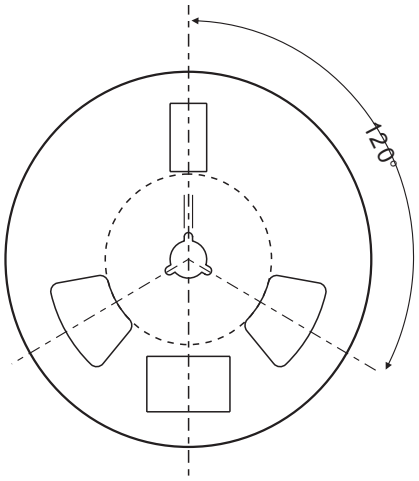
Fig. 5 - Typical Junction Capacitance

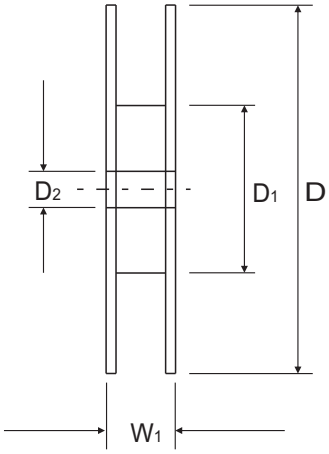


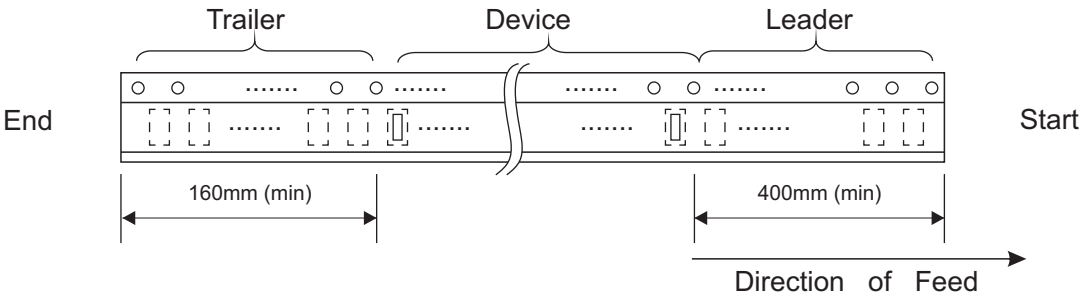
Reel Taping Specification









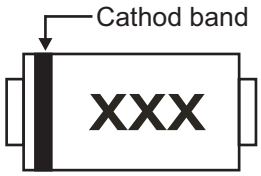


	SYMBOL	A	B	C	d	D	D1	D2
SMA-S	(mm)	2.85 ± 0.10	5.10 ± 0.10	1.25 ± 0.05	1.55 ± 0.05	178.00 ± 2.00	75.00 ± 2.00	13.00 ± 0.50
	(inch)	0.112 ± 0.004	0.201 ± 0.004	0.049 ± 0.002	0.061 ± 0.002	7.008 ± 0.079	2.953 ± 0.079	0.512 ± 0.020

	SYMBOL	E	F	P	P0	P1	T	W	W1
SMA-S	(mm)	1.75 ± 0.10	5.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	0.25 ± 0.05	12.00 ± 0.10	16.80 ± 4.00
	(inch)	0.069 ± 0.004	0.217 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.010 ± 0.002	0.472 ± 0.004	0.661 ± 0.157

Marking Code

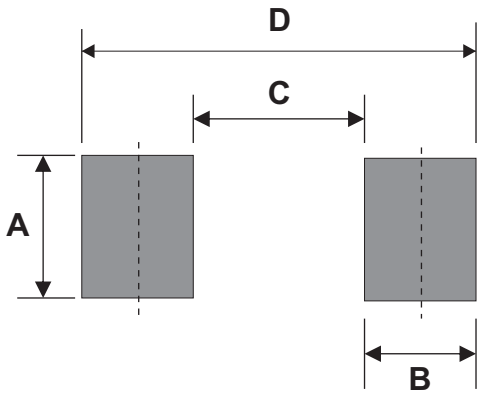
Part Number	Marking Code
CDBAS140-HF	14S



XXX = Product type marking code

Suggested PAD Layout

SIZE	DO-214AC/SMA-S	
	(mm)	(inch)
A	1.90	0.075
B	1.60	0.063
C	2.70	0.106
D	5.90	0.232



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
DO-214AC (SMA-S)	3,000	7