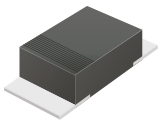
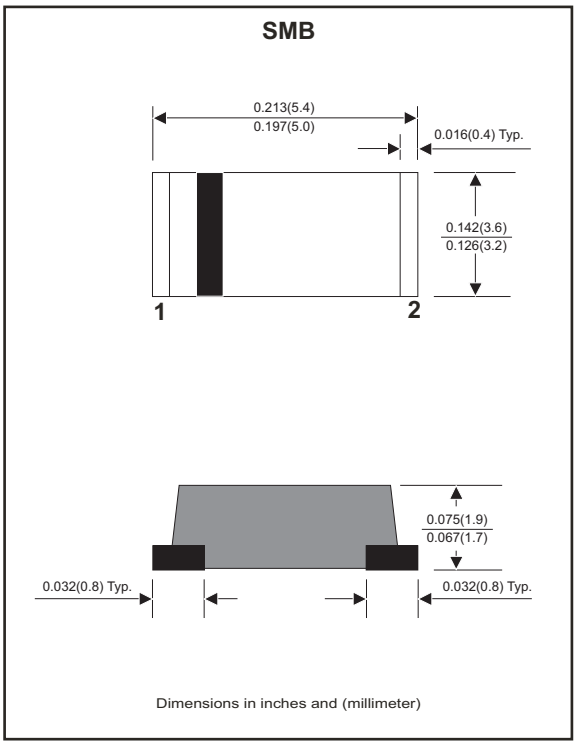
CDBB520-HF Thru. CDBB5200-HF

Reverse Voltage: 20-200 Volts
Forward Current: 5.0 Amp
RoHS Device



Features

-Halogen free.
-Batch process design, excellent powe
dissipation offers better reverse leakage.
current and thermal resistance.
-Low profile surface mounted application
in order to optimize board space.
-Low power loss, high efficiency.
-High current capability, low forward voltage dorp.
-High surge capability.
-Guardring for overvoltage protection.
-Ultra high-speed switching.
-Silicon epitaxial planar chip, metal silicon junction.
-Lead-free parts meet environmental
standards of MIL-STD-19500 /228



Mechanical data

-Case: Molded plastic, JEDEC SMB.
-Terminals: Solde plated, solderable per
MIL-STD-750, method 2026.
-Polarity: Indicated by cathode band.
-Mounting position: Any
-Weight:0.09 gram(approx.).

Symbo1 :

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

Parameter	CONDITIONS		Symbol	MIN.	TYP.	MAX.	Unit
Forward rectified current	See Fig.1		I_O			5.0	A
Forward surge current	8.3ms half sine wave superimposed on rated load (JEDEC method)		I_{FSM}			150	A
Reverse current	CDBB520-HF~	$V_R=V_{RRM}$ T_A=25°C	I_R			0.5	mA
	CDBB540-HF	$V_R=V_{RRM}$ T_A=125°C				20	
	CDBB550-HF~	$V_R=V_{RRM}$ T_A=25°C	I_R			0.5	mA
	CDBB5200-HF	$V_R=V_{RRM}$ T_A=125°C				10	
Thermal resistance	Junction to ambient		$R_{\theta JA}$		46		°C/W
	Junction to case		$R_{\theta Jc}$		24		°C/W
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage		C_J		380		pF
Storage temperature			T_{STG}	-65		+175	°C

Note 1: f=1MHz and applied 4V DC reverse voltage.

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

Parameter	Symbol	CDBB 520-HF	CDBB 530-HF	CDBB 540-HF	CDBB 550-HF	CDBB 560-HF	Unit
Repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	V
RMS voltage	V_{RMS}	14	21	28	35	42	V
Continuous reverse voltage	V_R	20	30	40	50	60	V
Maximum forward voltage @I_F=5.0A	V_F	0.50	0.50	0.50	0.70	0.70	V
Operating junction temperature	T_J	-55 to +125			-55 to +150		°C

Parameter	Symbol	CDBB 580-HF	CDBB 5100-HF	CDBB 5150-HF	CDBB 5200-HF	Unit
Repetitive peak reverse voltage	V_{RRM}	80	100	150	200	V
RMS voltage	V_{RMS}	56	70	105	140	V
Continuous reverse voltage	V_R	80	100	150	200	V
Maximum forward voltage @I_F=5.0A	V_F	0.85	0.85	0.90	0.92	V
Operating junction temperature	T_J	-55 to +150				°C

Rating and Characteristic Curves (CDBB520-HF Thru. CDBB5200-HF)

Fig.1-Typical Forword Current Derating Curve

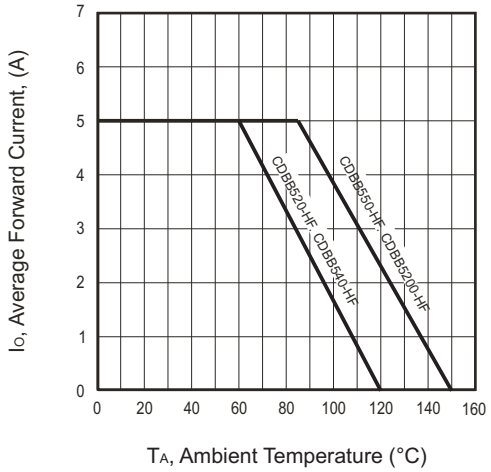


Fig.2-Typical Forward Characteristics

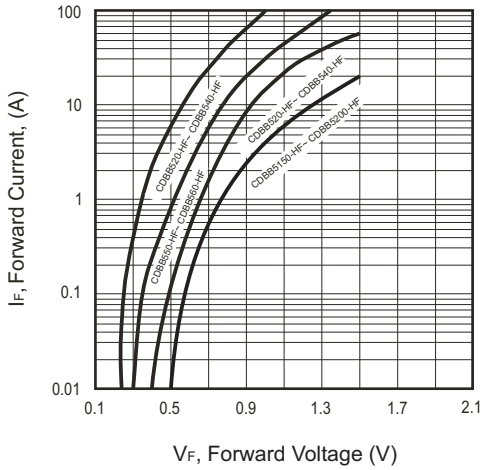


Fig.3 Maximum Non-repetitive Forward Surge Current

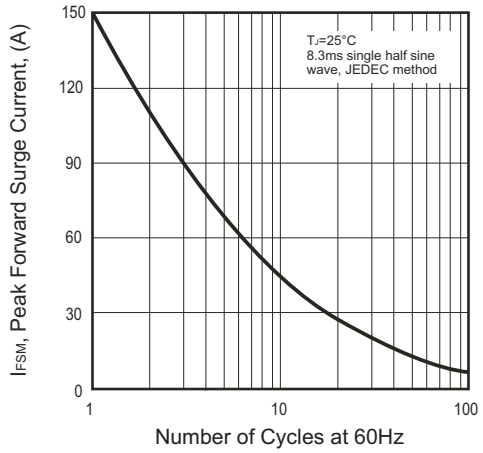


Fig4-Typical Junction Capacitance

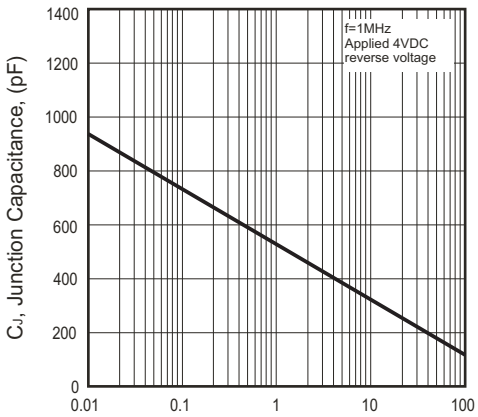
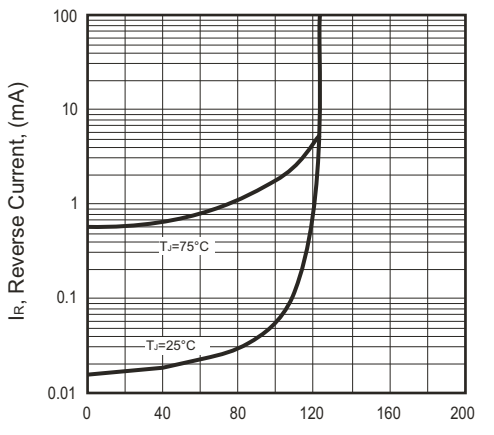
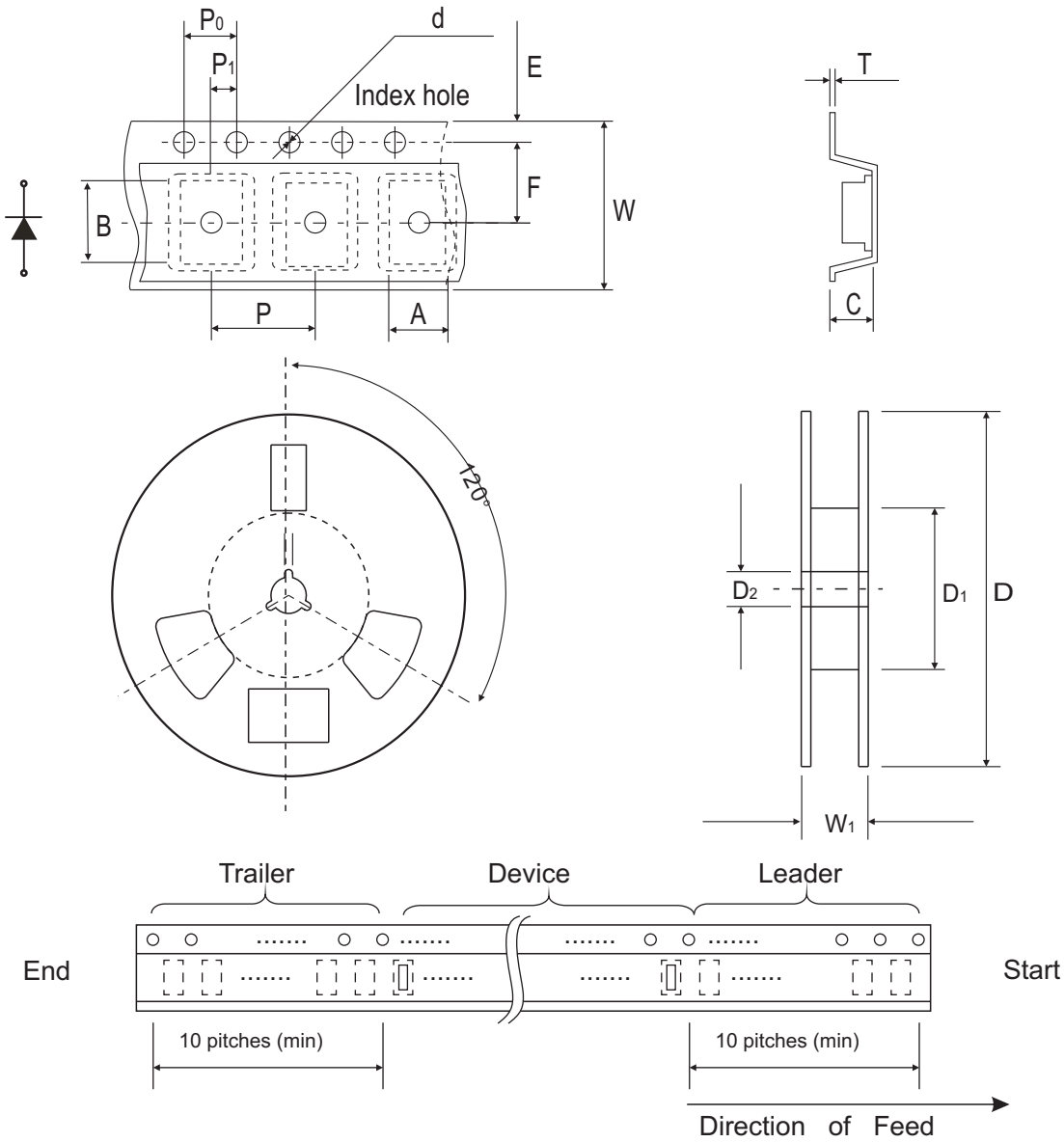


Fig.5-Typical Reverse Characteristics



Reel Taping Specification



	SYMBOL	A	B	C	d	D	D_1	D_2
SMB	(mm)	3.81 ± 0.10	5.74 ± 0.10	2.24 ± 0.10	1.50 ± 0.10	330 ± 2.00	50.0 MIN.	13.0 ± 0.50
	(inch)	0.150 ± 0.04	0.226 ± 0.04	0.088 ± 0.04	0.059 ± 0.004	12.99 ± 0.079	1.969 MIN.	0.512 ± 0.020

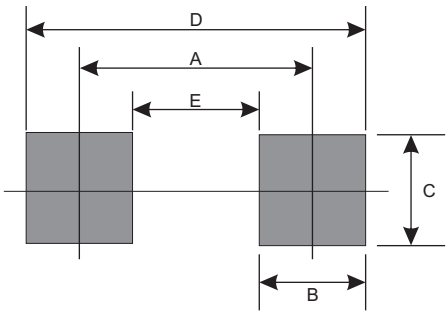
	SYMBOL	E	F	P	P_0	P_1	T	W	W_1
SMB	(mm)	1.75 ± 0.10	5.50 ± 0.10	8.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	0.23 ± 0.10	12.0 ± 0.30	18.0 ± 1.00
	(inch)	0.689 ± 0.004	0.217 ± 0.004	0.315± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.009 ± 0.004	0.472 ± 0.012	0.709 ± 0.040

Marking Code

Part Number	Marking Code
CDBB520-HF	SS52
CDBB530-HF	SS53
CDBB540-HF	SS54
CDBB560-HF	SS56
CDBB580-G	SS58
CDBB5100-G	S510
CDBB5150-G	S515
CDBB5200-G	S520

Suggested PAD Layout

SIZE	SMB	
	(mm)	(inch)
A	4.50	0.177
B	1.50	0.059
C	3.60	0.142
D	6.00	0.236
E	3.00	0.118



Standard Package

Case Type	Qty per Reel	Reel Size
	(Pcs)	(inch)
SMB	4000	13