

SMD Schottky Barrier Diode



SMD Diodes Specialist

CDBU54-HF (RoHS Device)

$I_o = 200 \text{ mA}$

$V_R = 30 \text{ Volts}$

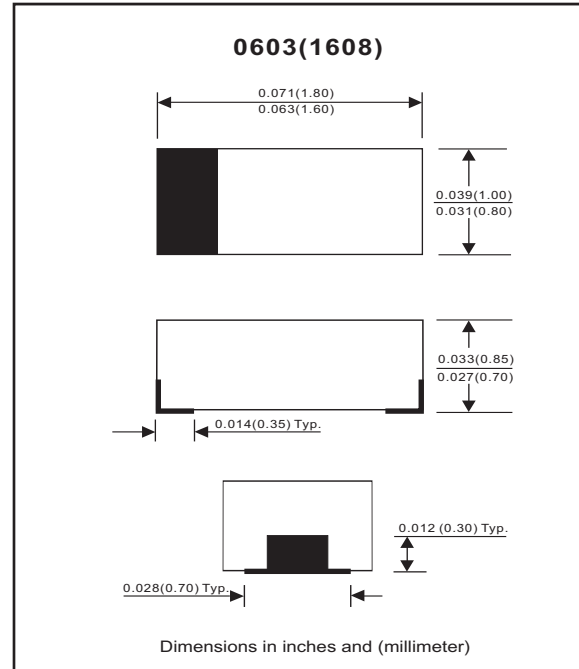


Features

- Halogen free.
- Low forward voltage.
- Designed for mounting on small surface.
- Extremely thin / leadless package.
- Majority carrier conduction.

Mechanical data

- Case: 0603(1608) standard package, molded plastic.
- Terminals: Gold plated, solderable per MIL-STD-750, method 2026.
- Marking code: cathode band & BF
- Mounting position: Any
- Weight: 0.003 gram(approx.).



Maximum Rating (at $T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Peak reverse voltage		V_{RM}			30	V
Reverse voltage		V_R			30	V
RMS reverse voltage		$V_{R(RMS)}$			21	V
Average forward rectified current		I_o			200	mA
Repetitive peak forward current		I_{FRM}			0.3	A
Forward current, surge peak	8.3 ms single half sine-wave superimposed on rate load(JEDEC method)	I_{FSM}			0.6	A
Power dissipation		P_D			150	mW
Storage temperature		T_{STG}	-65		+125	$^\circ\text{C}$
Junction temperature		T_j			+125	$^\circ\text{C}$

Electrical Characteristics (at $T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Forward voltage	$I_F = 0.1\text{mA}$ $I_F = 1\text{mA}$ $I_F = 10\text{mA}$ $I_F = 30\text{mA}$ $I_F = 100\text{mA}$	V_F			0.24 0.32 0.4 0.5 1	V
Reverse current	$V_R = 25\text{V}$	I_R			2	μA
Capacitance between terminals	$f = 1 \text{ MHz}$, and 1 VDC reverse voltage	C_T			10	pF
Reverse recovery time	$I_F=I_R=10\text{mA}$, $I_{rr}=0.1 \times I_R$, $R_L=100 \text{ Ohm}$	T_{rr}			5	nS

REV:A

RATING AND CHARACTERISTIC CURVES (CDBU54-HF)

Fig. 1 - Forward characteristics

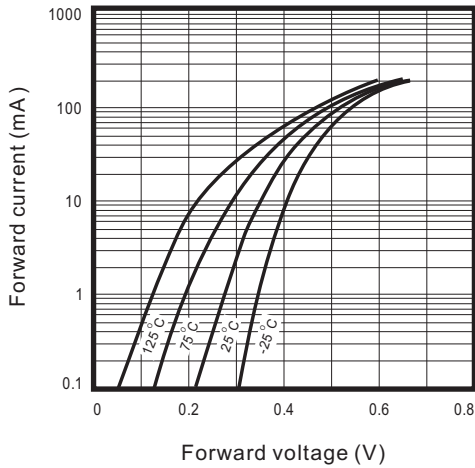


Fig. 2 - Reverse characteristics

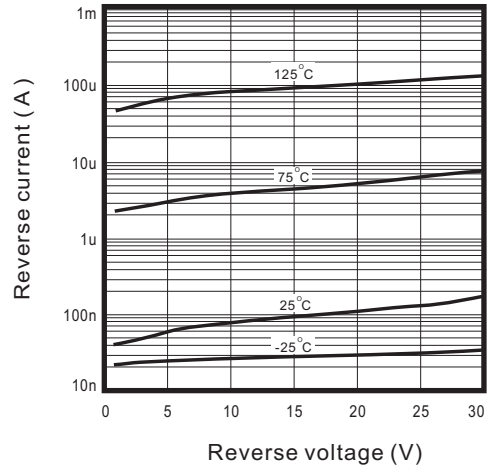


Fig.3 - Capacitance between terminals characteristics

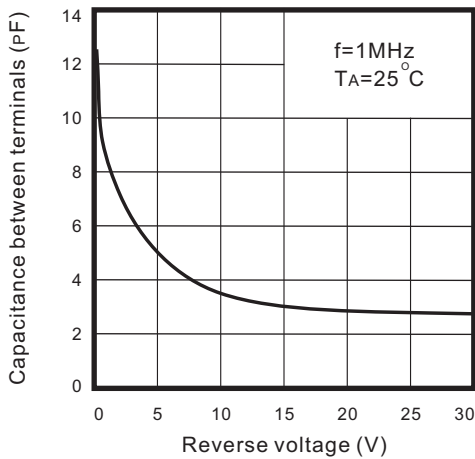
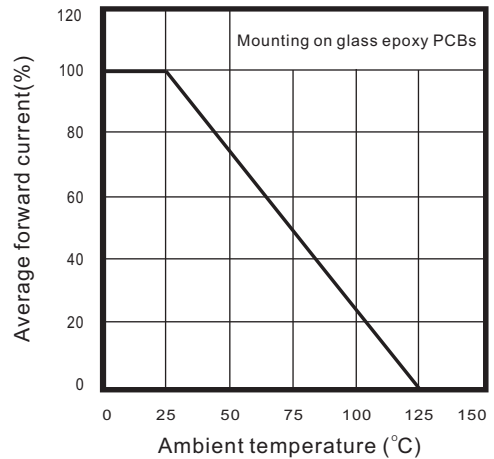
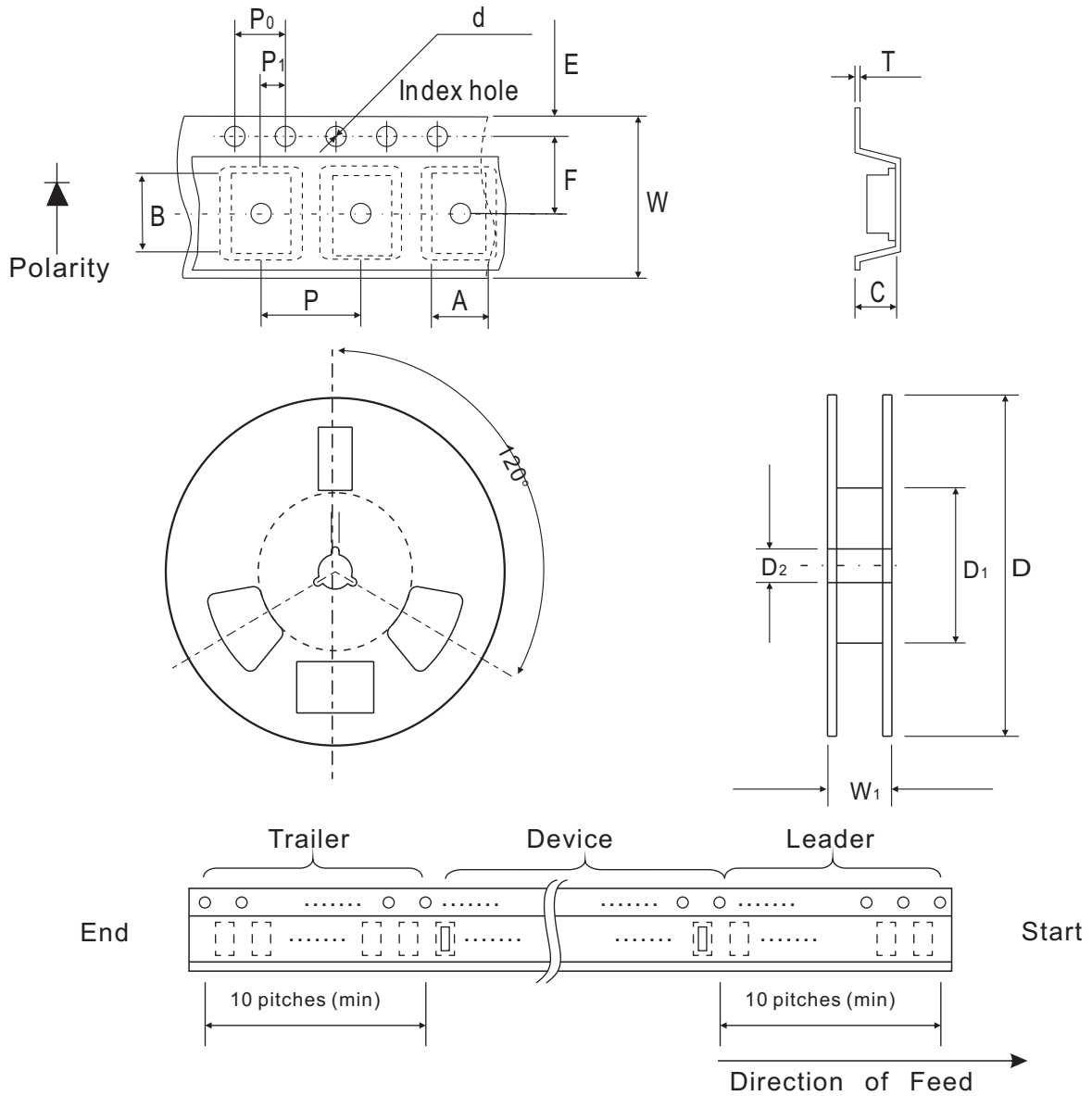


Fig.4 - Current derating curve



Reel Taping Specification



U/0603	SYMBOL	A	B	C	d	D	D ₁	D ₂
	(mm)	1.00 ± 0.10	1.85 ± 0.10	1.00 ± 0.10	1.55 ± 0.05	178 ± 1	60.0 MIN.	13.0 ± 0.20
	(inch)	0.039 ± 0.004	0.073 ± 0.004	0.039 ± 0.004	0.061 ± 0.002	7.008 ± 0.04	2.362 MIN.	0.512 ± 0.008

U/0603	SYMBOL	E	F	P	P ₀	P ₁	T	W	W ₁
	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	0.23 ± 0.05	8.00 ± 0.20	13.5 MAX.
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.009 ± 0.002	0.315 ± 0.008	0.531 MAX.

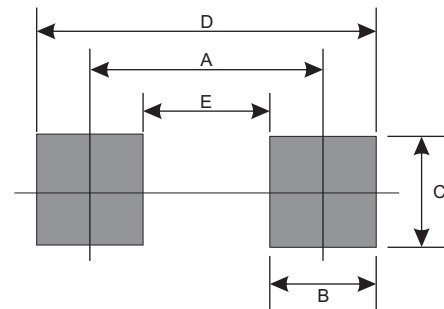
Marking Code

Park Number	Marking Code
CDBU54-HF	BF



Suggested PAD Layout

SIZE	U/0603	
	(mm)	(inch)
A	1.70	0.067
B	0.60	0.024
C	0.80	0.031
D	2.30	0.091
E	1.10	0.043



Standard Package

Case Type	Qty per Reel	Reel Size
	(Pcs)	(inch)
U/0603	4000	7