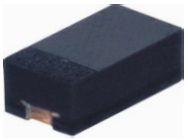
SMD Switching Diode

COMCHIP
SMD Diodes Specialist

CDSU4148-HF (RoHS Device)

High Speed



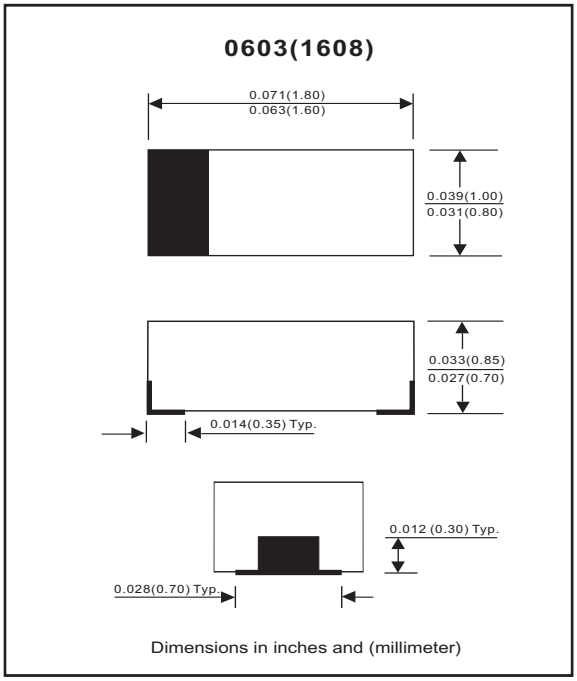
Features

Halogen free.

Designed for mounting on small surface.

Extremely thin/leadless package.

High mounting capability, strong surge withstand, high reliability.



Mechanical data

Case: 0603 (1608) standard package, molded plastic.

Terminals: Gold plated, solderable per MIL-STD-750, method 2026.

Polarity: Indicated by cathode band.

Mounting position: Any.

Weight: 0.003 gram (approx.).

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Repetitive peak reverse voltage		V_{RRM}			100	V
Reverse voltage		V_R			75	V
Average forward current		I_O			150	mA
Forward current , surge peak	tp=1uS tp=1mS	I_{FSM}		4 1		A
Repetitive peak forward current		I_{FRM}			300	mA
Power Dissipation		P_D			150	mW
Storage temperature		T_{STG}	-40		+125	℃
Junction temperature		Tj	-40		+125	℃

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Forward voltage	I_F = 50 mA DC	V_F			1.0	V
Reverse current	V_R = 20 V V_R = 75 V	I_R			25 2.5	nA uA
Capacitance between terminals	f = 1MHz, and 0 VDC reverse voltage	C_T			4	pF
Reverse recovery time	I_F = I_R = 10 mA, R_L =100 ohms, i_{rr}= 1mA	Trr			4	nS

RATING AND CHARACTERISTIC CURVES (CDSU4148-HF)

Fig. 1 - Forward characteristics

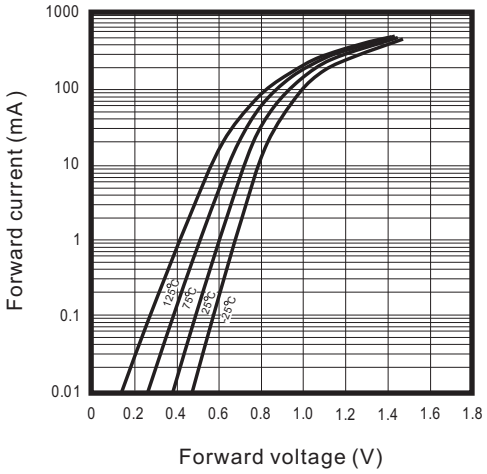


Fig. 2 - Reverse characteristics

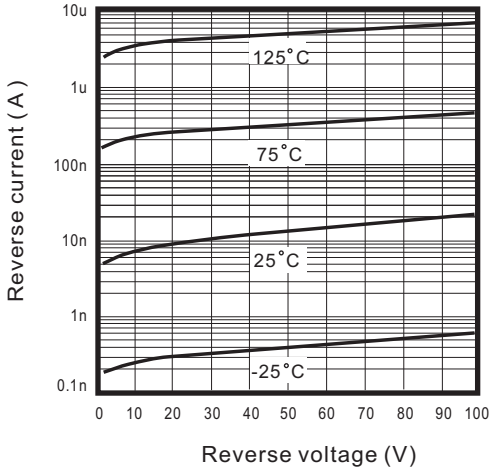


Fig. 3 - Capacitance between terminals characteristics

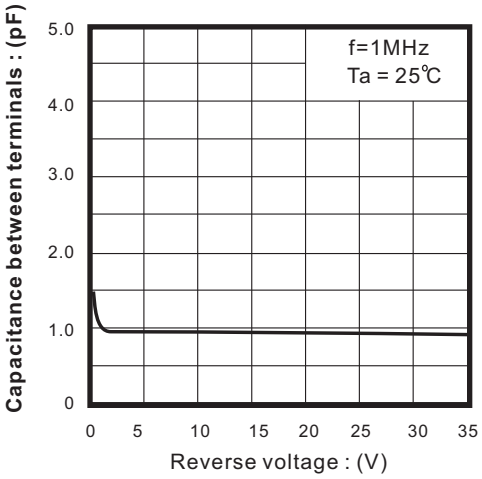
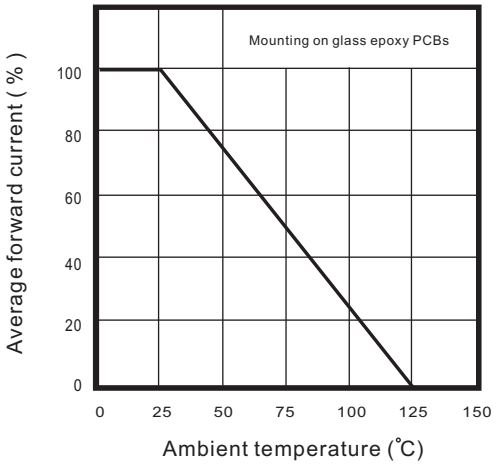
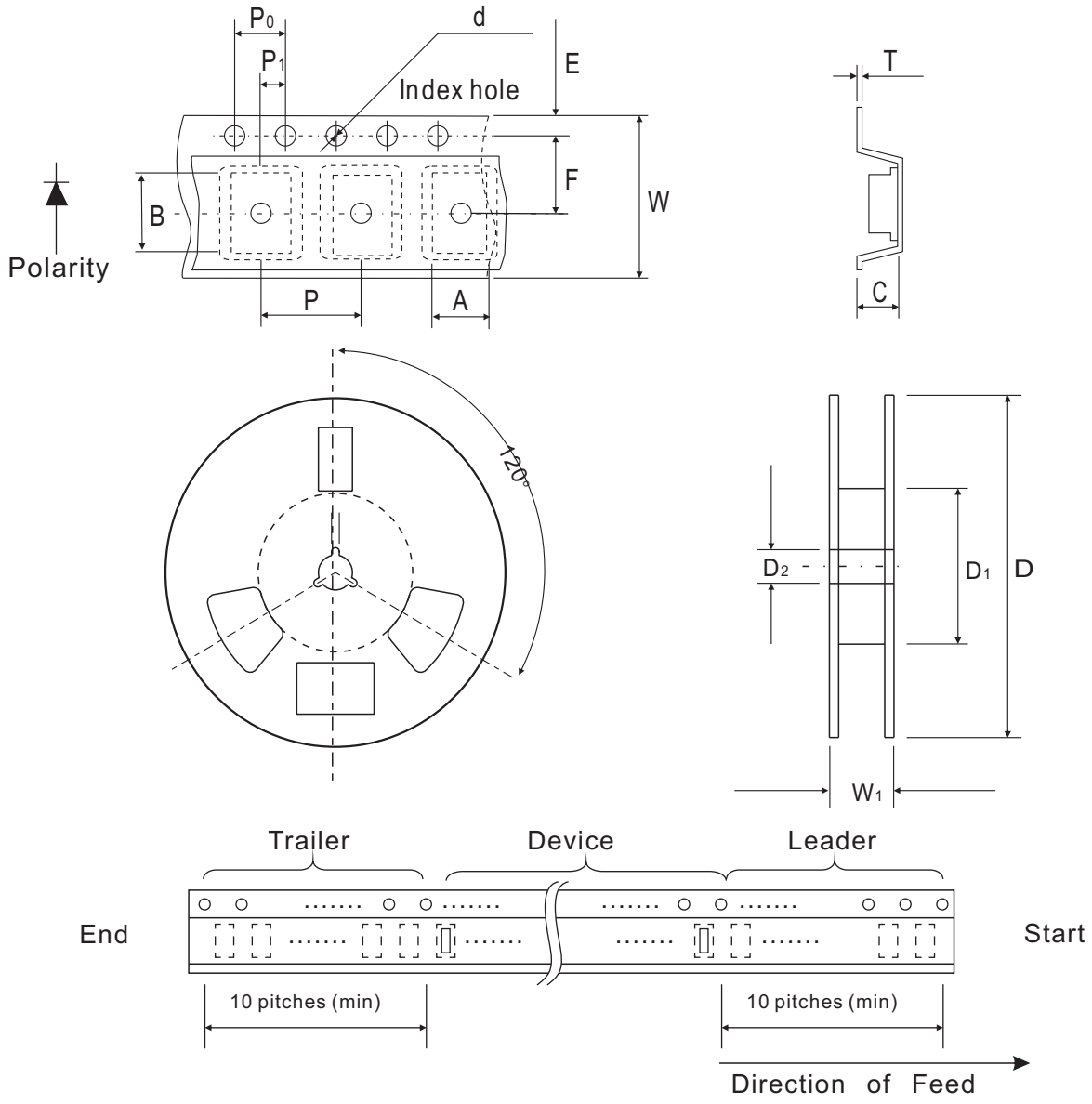


Fig. 4 - Current derating curve



Reel Taping Specification

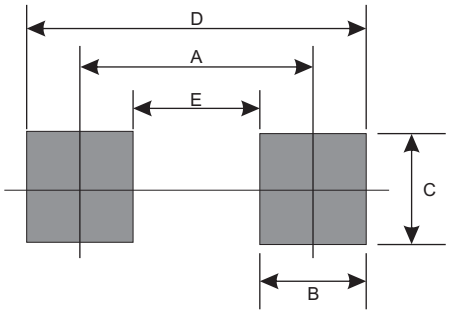


	SYMBOL	A	B	C	d	D	D_1	D_2
U/0603	(mm)	1.00 ± 0.10	1.85 ± 0.10	1.00 ± 0.10	1.55 ± 0.05	178 ± 1	60.0 MIN.	13.0 ± 0.20
	(inch)	0.039 ± 0.004	0.073 ± 0.004	0.039± 0.004	0.061 ± 0.002	7.008 ± 0.04	2.362 MIN.	0.512 ± 0.008

	SYMBOL	E	F	P	P_0	P_1	T	W	W_1
U/0603	(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.

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