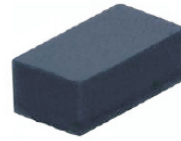


CPDER Series(RoHS Device)

Features

Bi-directional ESD protection.
(16kV) IEC 61000-4-2 rating.
Surface mount package.
Ultra small SMD package:0503.
High component density.



Mechanical data

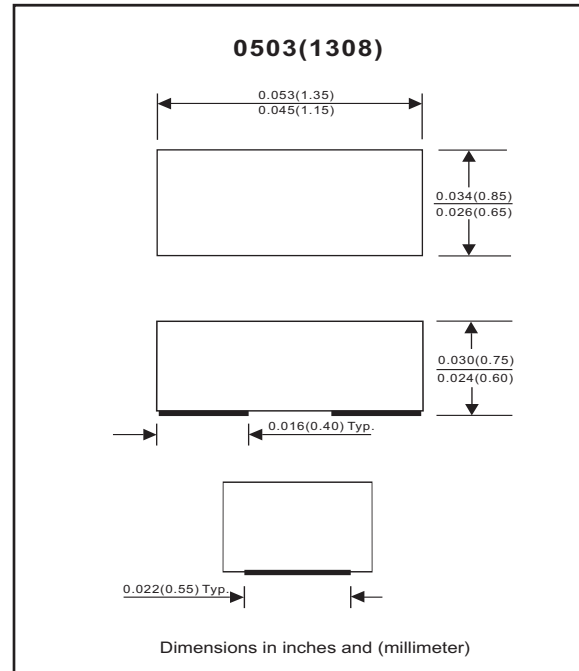
Case: 0503(1308) standard package,
molded plastic.
Terminals: Gold plated, solderable per
MIL-STD-750,method 2026.

Marking Code:

CPDER5V0: E05
CPDER12V: E12
CPDER24V: E24

Mounting position: Any.

Weight: 0.002 gram(approx.).



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

Parameter		Conditions	Symbol	Min	Typ	Max	Unit
Diode breakdown voltage	CPDER5V0	I _R = 1mA	V _{BD}	5.1	7.0		V
	CPDER12V			13	17		
	CPDER24V			25	28		
Leakage current	CPDER5V0	V _R = 5V	I _L		0.1	2.0	uA
	CPDER12V	V _R = 12V					
	CPDER24V	V _R = 24V					
Junction capacitance	CPDER5V0	V _R = 0V, f = 1MHz	C _T		15	20	pF
	CPDER12V				12	---	
	CPDER24V				10	---	
ESD capability	CPDER Series	IEC 61000-4-2(air) IEC 61000-4-2(contact)	ESD			16 8	kV
Clamping voltage	CPDER5V0	I _{PP} = 5A, T _P = 8/20us	V _C			15	V
	CPDER12V	I _{PP} = 1A, T _P = 8/20us				25	
	CPDER24V	I _{PP} = 1A, T _P = 8/20us				47	
Peak pulse power	CPDER5V0	T _P = 8/20us	P _{PP}			75	W
	CPDER12V					25	
	CPDER24V					47	
Operation temperature	CPDER Series		T _j			125	°C
Storage temperature	CPDER Series		T _{STG}	-55		150	°C

RATING AND CHARACTERISTIC CURVES (CPDER Series)

Fig. 1 - 8/20us Peak pulse current wave form acc. IEC 61000-4-5

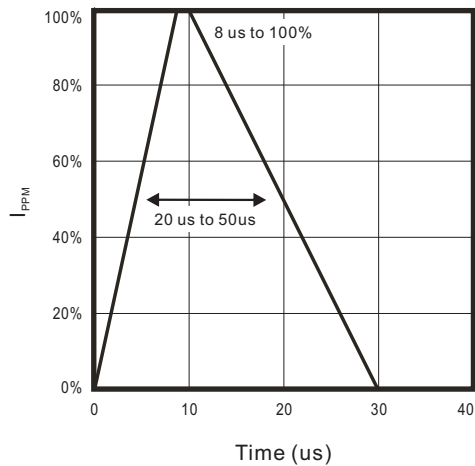


Fig. 2 - Reverse characteristics

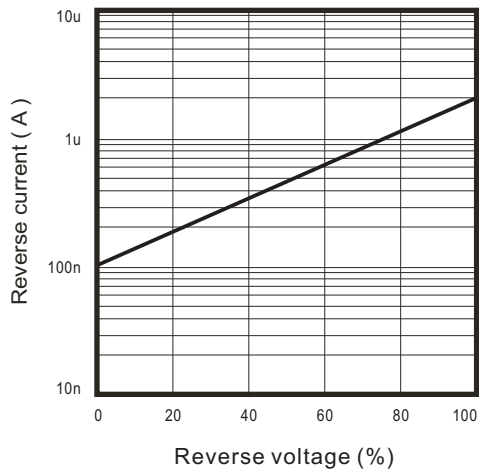


Fig. 3 - Capacitance between terminals characteristics

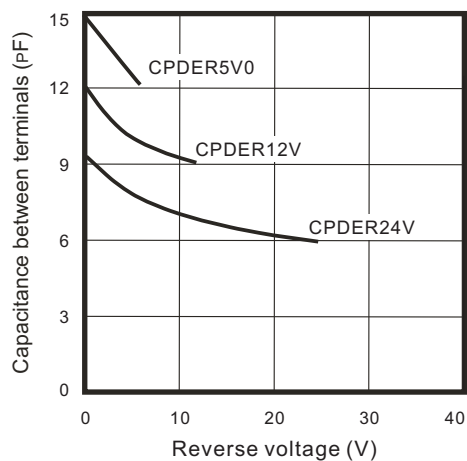
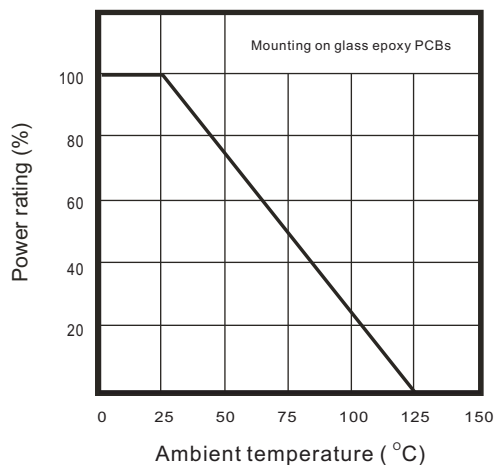
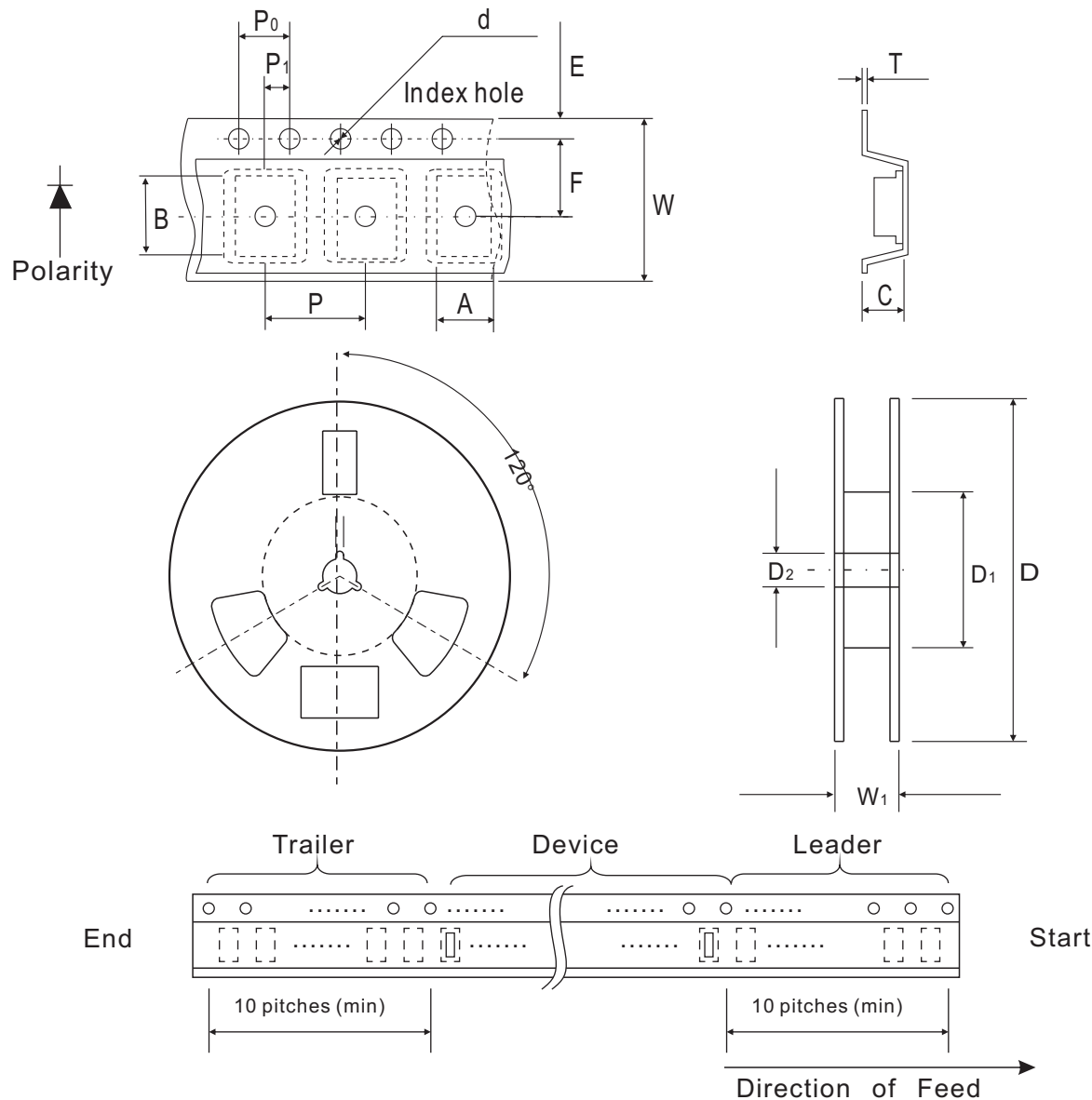


Fig. 4 - Power rating derating curve



Reel Taping Specification



ER/0503	SYMBOL	A	B	C	d	D	D ₁	D ₂
	(mm)	0.90 ± 0.10	1.46 ± 0.10	0.80 ± 0.10	1.55 ± 0.05	178 ± 1	60.0 MIN.	13.0 ± 0.20
	(inch)	0.035 ± 0.004	0.057 ± 0.004	0.031 ± 0.004	0.061 ± 0.002	7.008 ± 0.04	2.362 MIN.	0.512 ± 0.008

ER/0503	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 ± 0.10	0.22 ± 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	0.008 ± 0.002	0.315 ± 0.008	0.531 MAX.

Marking Code

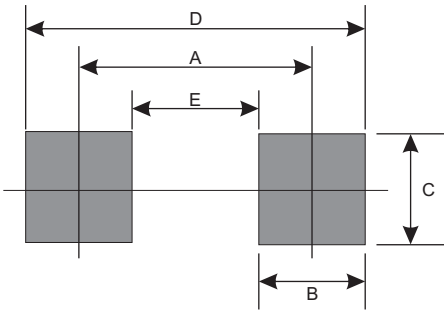
Part Number	Marking Code
CPDER5V0	E05
CPDER12V	E12
CPDER24V	E24



xxx = Product type marking code

Suggested PAD Layout

SIZE	ER/0503	
	(mm)	(inch)
A	0.85	0.033
B	0.55	0.022
C	0.85	0.033
D	1.40	0.055
E	0.30	0.118



Standard Package

Case Type	Qty per Reel	Reel Size
	(Pcs)	(inch)
ER/0503	5000	7