

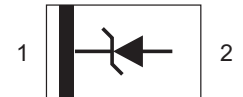
PRIMARY CHARACTERISTICS	
P_{PP}	40W
$V_{RWM,Max}$	5.0V
I_{PP}	2.0A
V_C	20.0V
$V_{BR,Min}$	6.0V
$T_{J,Max}$	125°C

FEATURES

- 40 Watts Peak Pulse Power (tp=8/20s)
- Low leakage current.
- Low capacitance : 0.8pF(Max)
- Low clamping voltage
- Working voltages : 5.0V
- Low leakage current
- IEC 61000-4-2 Level 4 ESD protection
- Moisture Sensitivity Level 1

0603 PACKAGE

- Body Marking Example
Marking : P



Pin1 cathode
Pin2 anode

MECHANICAL DATA

- Case : Molded plastic,0603
- Polarity : Indicated by cathode band
- Terminals : Golden Plated terminals, solderable per MIL-STD-750,Method 2026
- Epoxy : UL94-V0 rated flame retardant

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

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Peak pulse power	tp = 8/20us	P_{PP}			40	W
Peak pulse current	tp = 8/20us	I_{PP}			2	A
ESD per IEC 61000-4-2	Air discharge Contact discharge	ESD			±16 ±8.0	kV
Operating junction temperature range		T_J	-55		+125	°C
Storage temperature range		T_{STG}	-55		+150	°C

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

Electrical characteristics (at $T_A=25^\circ\text{C}$ unless otherwise noted, $V_F = 1.20\text{V}$ Max. @ $I_F = 15\text{mA}$)

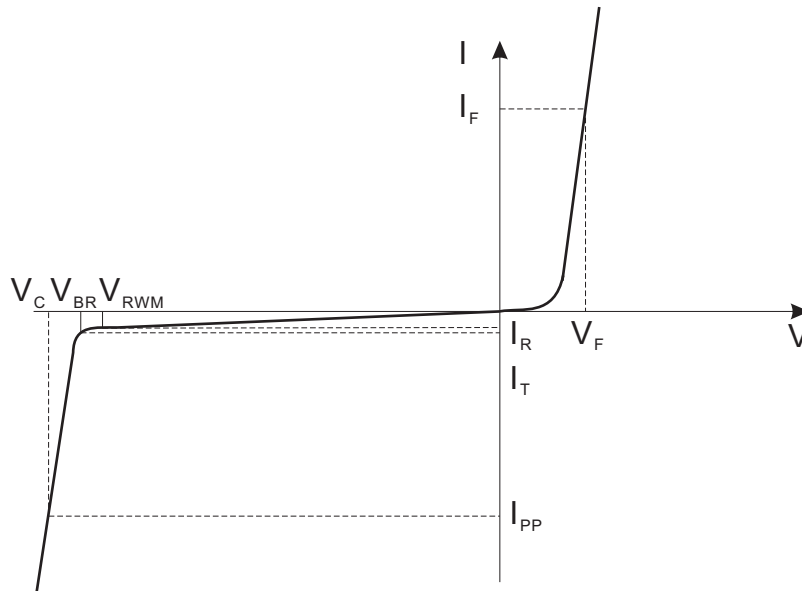
Part No.	$V_{RWM}(V)$ Max.	$I_R(\mu A)$ @ V_{RWM} Max.	$I_T(mA)$	$V_{BR}(V)$ @ I_T Min.	$V_C(V)$ @ $I_{PP}=2.0A$ Max.	$C_J(pF)$ @ $V_R=0V, f=1\text{MHz}$ Max.
ESD5LFN5.0	5.0	2.0	1.0	6.0	20	0.8

Over voltage available upon request.

1. V_{BR} is measured with a pulse test current I_T at an ambient temperature of 25°C.

2. Surge current waveform per Figure 1.

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



Uni-Directional TVS

V_C : Clamping Voltage @ I_{PP}

I_{PP} : Maximum Reverse Peak Pulse Current

V_{RWM} : Maximum Reverse Working voltage

I_R : Maximum Reverse Leakage Current @ V_{RWM}

V_{BR} : Breakdown voltage @ I_T

I_T : Test Current

P_{PP} : Peak Pulse Power

I_F : Forward Current

V_F : Forward Voltage @ I_F

C_J : Max. Capacitance @ $V_R = 0\text{V}$ and $f = 1\text{MHz}$



Rating and characteristic curves (ESD5LFN5.0)

FIG.1- 8 X 20us PULSE WAVEFORM

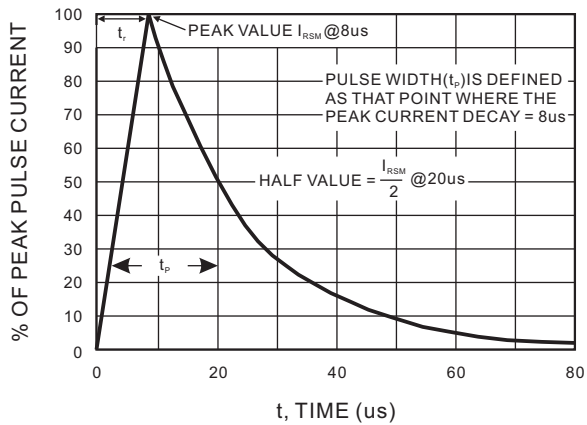


FIG.2- CLAMPING VOLTAGE VS. PEAK PULSE CURRENT

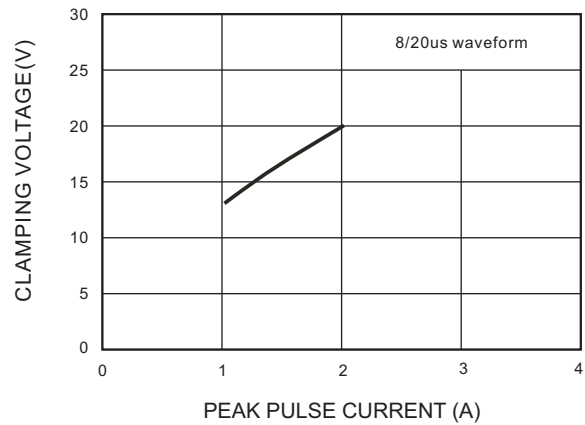
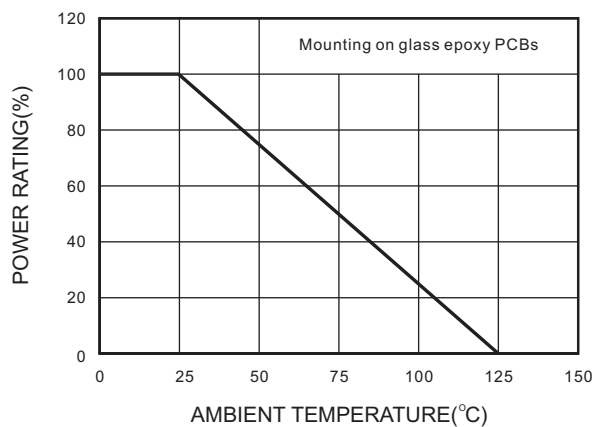
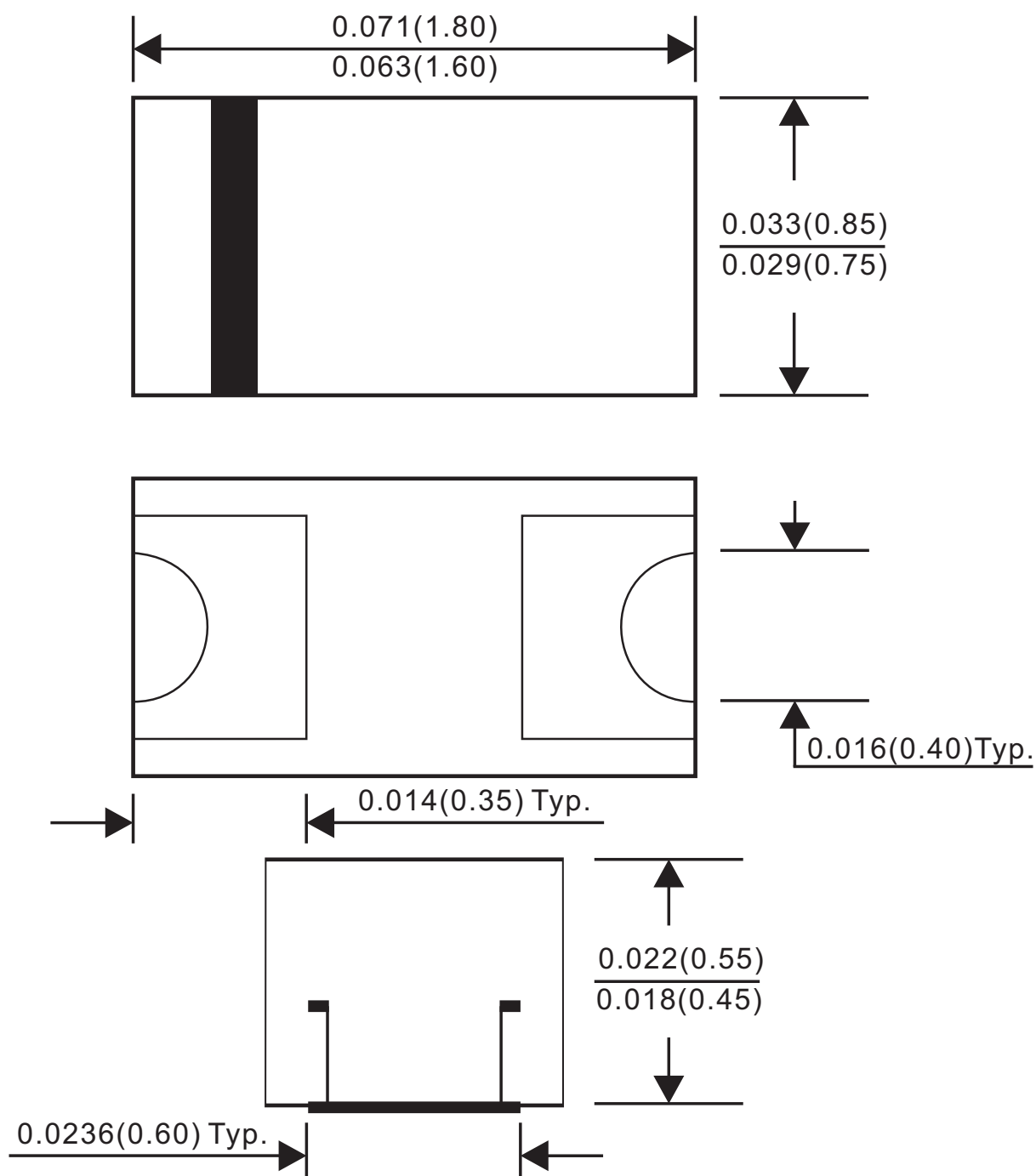


FIG.3- POWER RATING DERATING CURVE



Outline Drawing

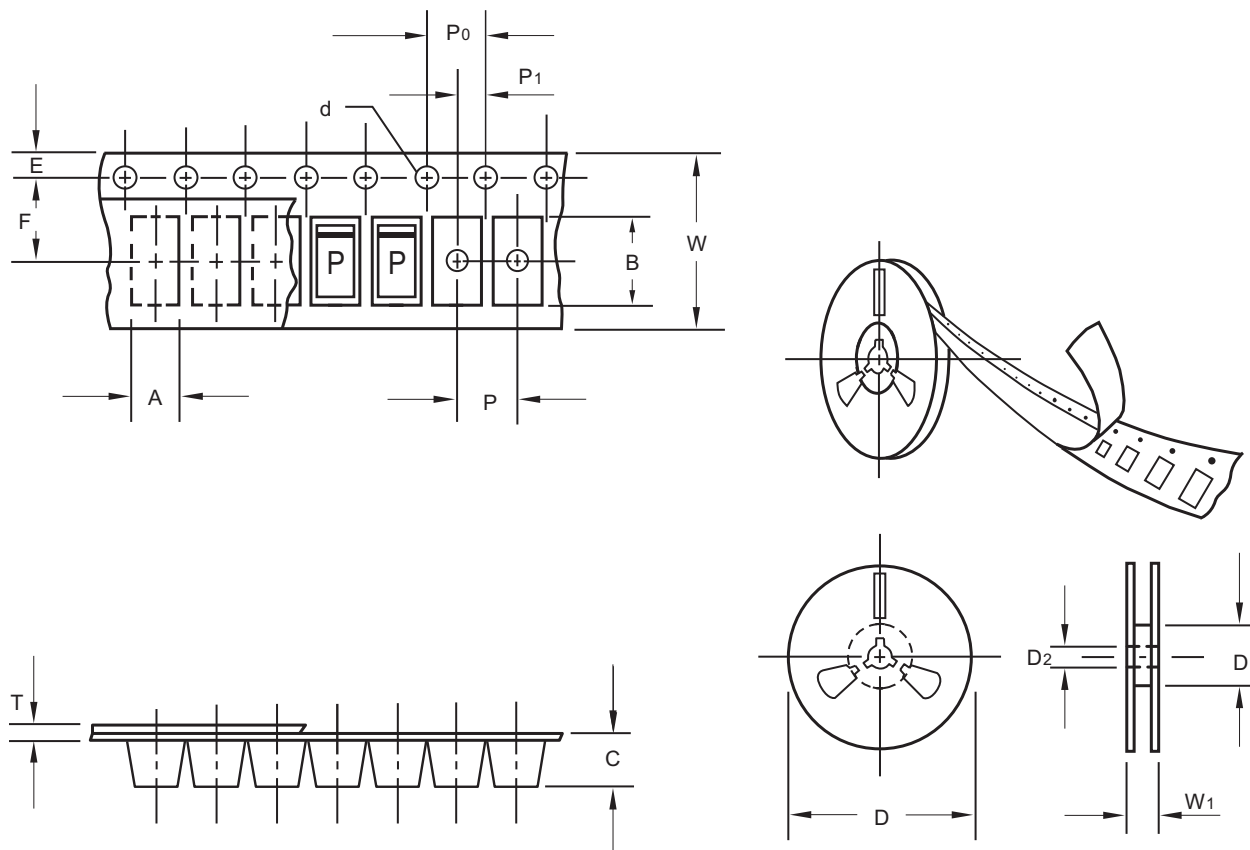
0603



Dimensions in inches and (millimeters)

Rev.B

Packing information



unit:mm

Item	Symbol	Tolerance	0603
Carrier width	A	0.1	1.00
Carrier length	B	0.1	1.80
Carrier depth	C	0.1	0.65
Sprocket hole	d	0.1	1.50
13" Reel outside diameter	D	2.0	-
13" Reel inner diameter	D ₁	min	-
7" Reel outside diameter	D	2.0	178.00
7" Reel inner diameter	D ₁	min	62.00
Feed hole diameter	D ₂	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.05	3.50
Punch hole pitch	P	0.1	4.00
Sprocket hole pitch	P ₀	0.1	4.00
Embossment center	P ₁	0.05	2.00
Overall tape thickness	T	0.1	0.23
Tape width	W	0.1	8.00
Reel width	W ₁	1.0	11.40

Note: Devices are packed in accordance with EIA standard 481-D and specifications listed above.

Ordering Information:

Device PN	Packing
ESD5FN5.0 -T ⁽¹⁾ H ⁽²⁾ -WS	Tape&Reel: 5 Kpcs/Reel

Note: (1) Packing code, Tape & Reel Packing

(2) Halogen free product for packing code suffix "H"

Disclaimer

WILLAS reserves the right to make changes without notice to any product specification herein, to make corrections, modifications, enhancements or other changes. WILLAS or anyone on its behalf assumes no responsibility or liability for any errors or inaccuracies. Data sheet specifications and its information contained are intended to provide a product description only. "Typical" parameters which may be included on WILLAS data sheets and/ or specifications can and do vary in different applications and actual performance may vary over time. WILLAS does not assume any liability arising out of the application or use of any product or circuit.

This is the preliminary specification. WILLAS products are not designed, intended or authorized for use in medical, life-saving implant or other applications intended for life-sustaining or other related applications where a failure or malfunction of component or circuitry may directly or indirectly cause injury or threaten a life without expressed written approval of WILLAS. Customers using or selling WILLAS components for use in such applications do so at their own risk and shall agree to fully indemnify WILLAS Inc and its subsidiaries harmless against all claims, damages and expenditures.