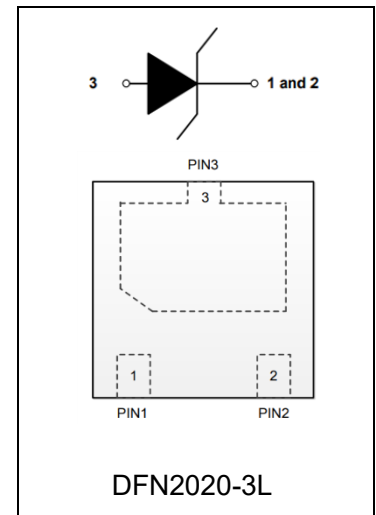


Features

- ◆ Low Clamping Voltage
- ◆ DFN2020-3 L package
- ◆ Protect one I/O or power line
- ◆ Stand-off Voltage: 24V
- ◆ Response Time is Typically < 1 ns
- ◆ Transient protection for data lines to
IEC 61000-4-2(ESD) $\pm 30\text{KV}$ (air), $\pm 30\text{KV}$ (contact)
IEC 61000-4-4 (EFT) 80A (5/50ns)
IEC 61000-4-5 (Lightning) 150A (8/20us)
- ◆ Marking: P24/004



Applications

- ◆ Power supply protection
- ◆ Power management
- ◆ Cell phone handsets and accessories
- ◆ Personal digital assistants (PDA's)
- ◆ Notebooks, desktops, and servers
- ◆ Cellular handsets & accessories
- ◆ Computer and peripherals

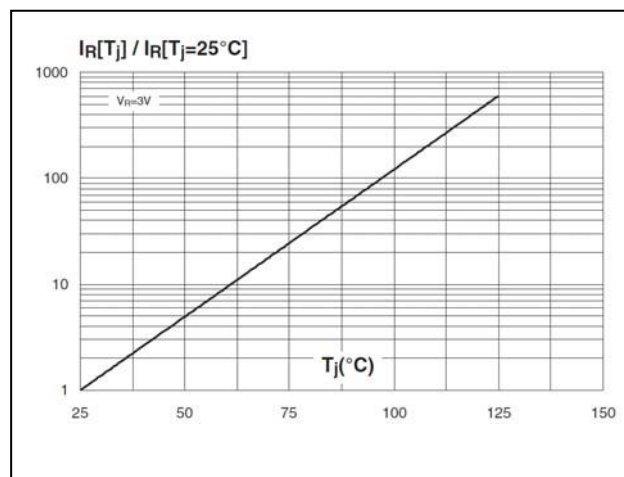
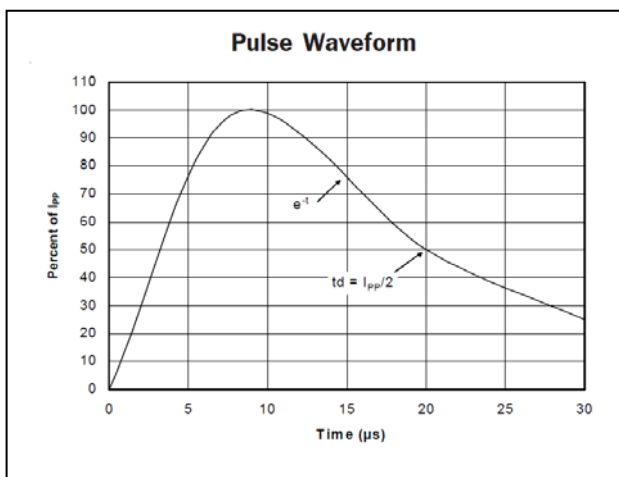
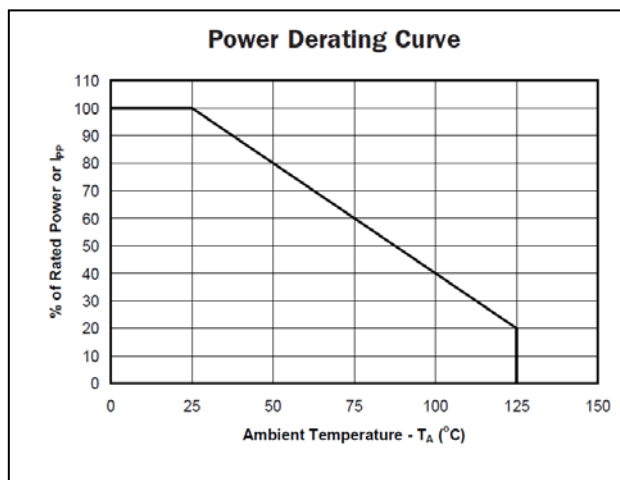
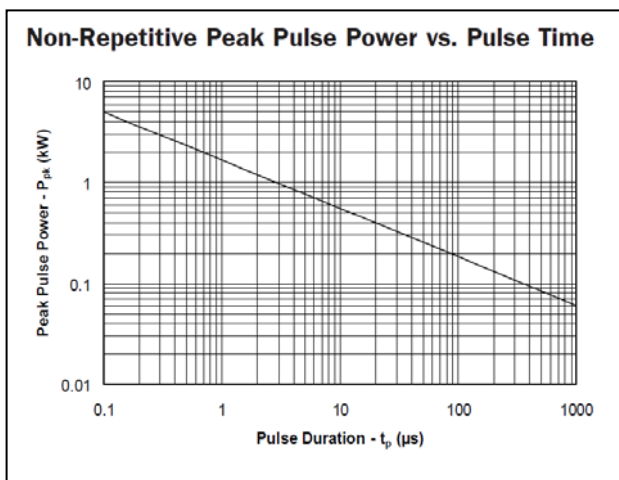
Maximum Rating @ Ta=25°C unless otherwise specified

Symbol	Parameter		Ratings	Units
ESD	IEC 61000-4-2 (HBM-ESD)	Contact	30	KV
		Air	30	
T _L	Lead Soldering Temperature		260(10sec.)	°C
T _J	Operating Temperature		-55 to +125	°C
T _{STG}	Storage Temperature		-55 to +150	°C

Electrical Characteristics@ Ta=25°C unless otherwise

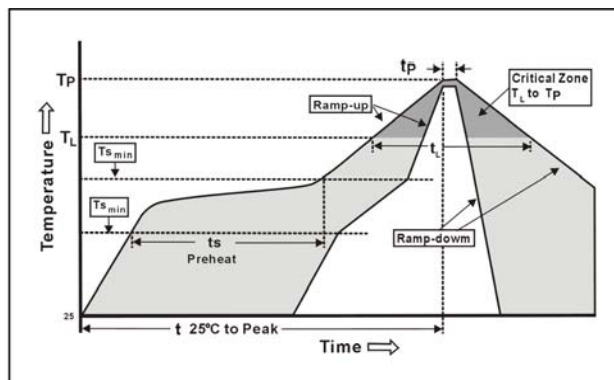
Symbol	Parameter	Conditions	Min.	Typ.	Max.	Units
V_{RWM}	Reverse Working Voltage				24	V
V_{BR}	Reverse Breakdown Voltage	$I_T = 1mA$,	24.8		29.8	V
I_R	Reverse Leakage Current	$V_{RWM} = 24V$			1	μA
V_C	Clamping Voltage	$I_{PP} = 1A$, $t_p = 8/20\mu s$			36	V
		$I_{PP} = 220A$, $t_p = 8/20\mu s$			45	V
C_J	Junction Capacitance	$V_R = 0V$, $f = 1MHz$			1500	pF

Typical Characteristics@ Ta=25°C unless otherwise specified



Soldering Parameters

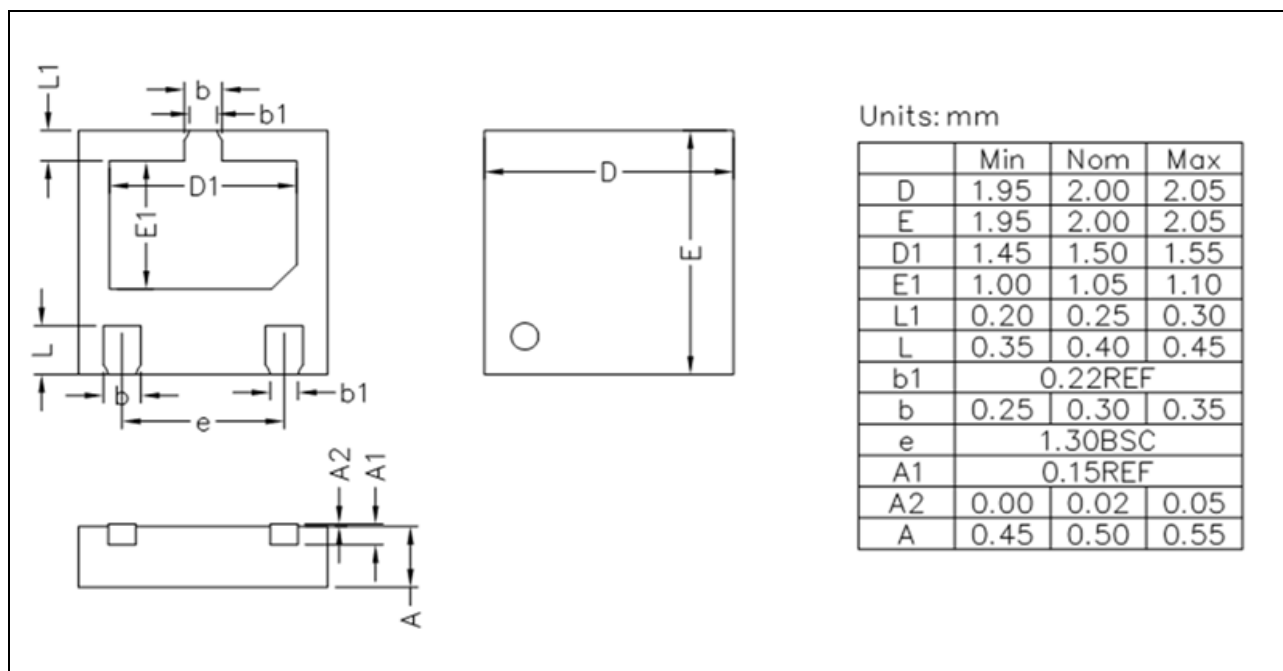
Reflow Condition		Fb – Free assembly
Pre Heat	- Temperature Min ($T_{s(\text{Min})}$)	150°C
	- Temperature Max ($T_{s(\text{Max})}$)	200°C
	- Time (Min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus) Temp (T_L) to peak		3°C/second Max
$T_{s(\text{Max})}$ to T_L - Ramp-up Rate		3°C/second Max
Reflow	- Temperature (T_L) (Liquidus)	217°C
	- Temperature (t_L)	60 – 150 seconds
Peak Temperature (T_p)		250 ^{+0/-5} °C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		6°C/second Max
Time 25°C to peak Temperature (T_p)		8 minutes Max.
Do not exceed		260°C



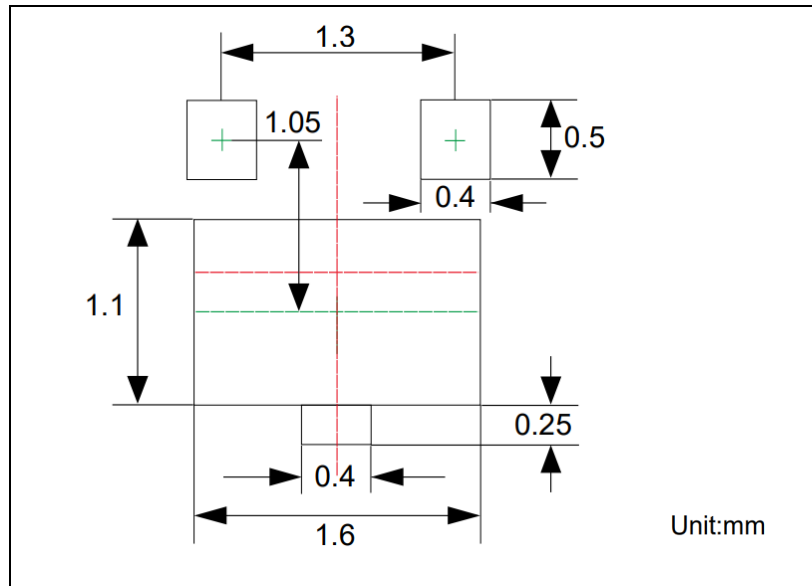
Package Outline

Plastic surface mounted package

DFN 2020-3L



Soldering Footprint



Package Information

Device	Package	Shipping	Reel Size
ESD3P24V	DFN2020-3L	3K/Reel	7 inch