DFLU1200-7-FS

Surface Mount Schottky Barrier Rectifiers

Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction,majority carrier conduction
- Low power loss,high efficiency
- High forward surge current capability
- High temperature soldering guaranteed: 260℃/10 seconds
- Compliant to RoHS Directive 2011/65/EU
- Compliant to Halogen-free





Mechanical data

- **Case**: JEDEC PowerDI-123 molded plastic body
- **Terminals**: Plated axial leads, solderable per MIL-STD-750, Method 2026
- **Polarity**: Color band denotes cathode end
- **Mounting Position**: Any

Maximum ratings and Electrical Characteristics (AT T_A=25°C unless otherwise noted)

PARAMETER	*SYMBOLS*	DFLU1200-7-FS	**UNITS**
Maximum repetitive peak reverse voltage	V_{RRM}	200	V
Maximum RMS voltage	V_{RMS}	141	V
Maximum DC blocking voltage	V_{DC}	200	V
Maximum average forward rectified current at T_L(see fig.1)	$I_{(AV)}$	1.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	50	A
Maximum instantaneous forward voltage at 1.0A	V_F	0.85	V
Maximum instantaneous forward voltage at 2.0A	V_F	0.95	V
Maximum DC reverse current T_A=25℃ at rated DC blocking voltage	I_R	2	uA
Typical junction capacitance (NOTE 1)	C_J	30	pF
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	85	°C/W
Operating junction temperature range	$T_{J,}$	-55 to +175	°C
Storage temperature range	T_{STG}	-55 to +175	°C

Note:1.Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2.P.C.B. mounted with 2.0x2.0″(5.0x5.0cm) copper pad areas

Rating and characteristic curves

FIG. 1- FORWARD CURRENT DERATING CURVE

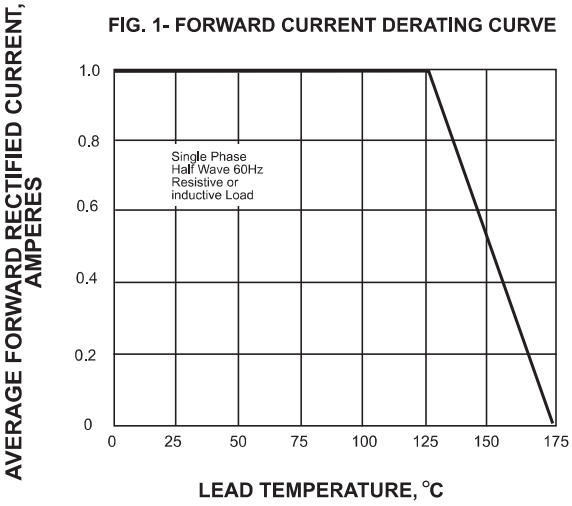


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

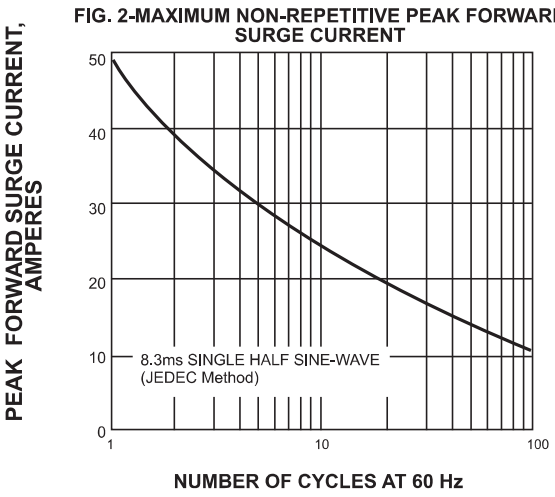


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

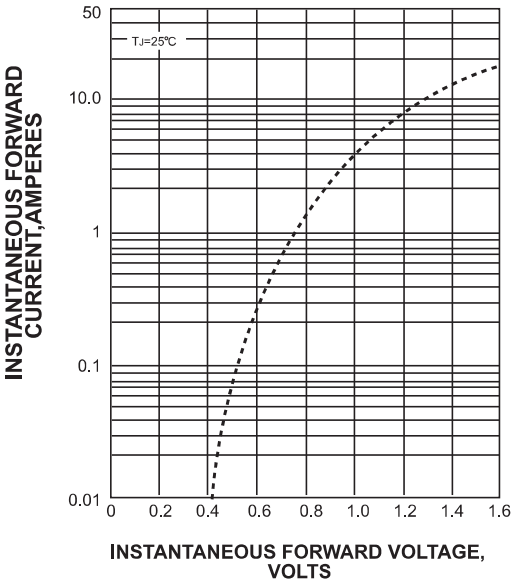


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

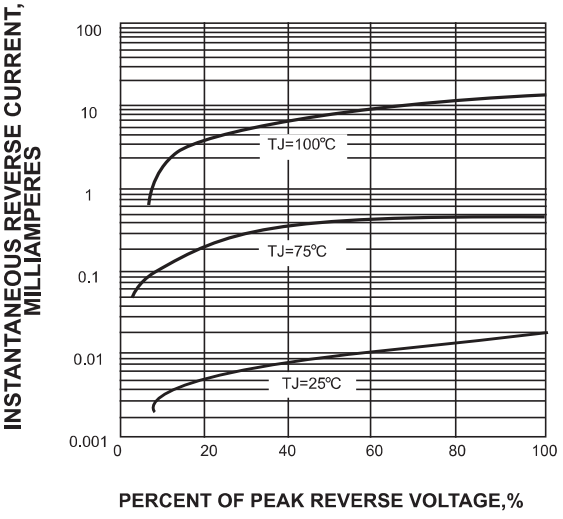


FIG. 5-TYPICAL JUNCTION CAPACITANCE

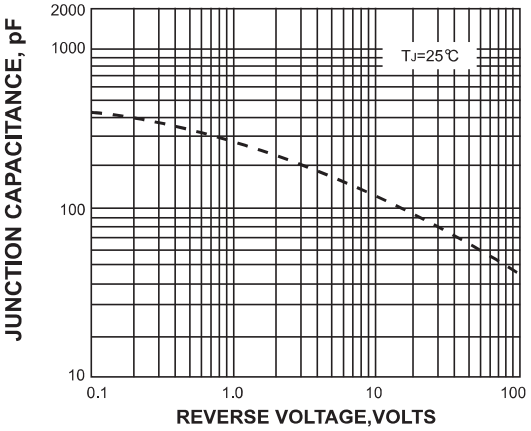
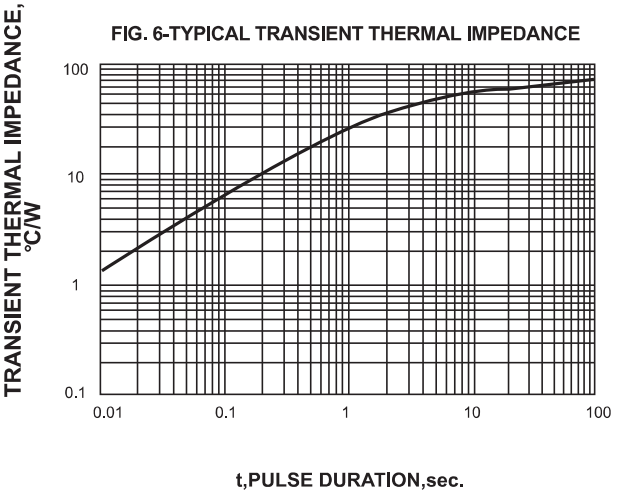


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



Pinning information

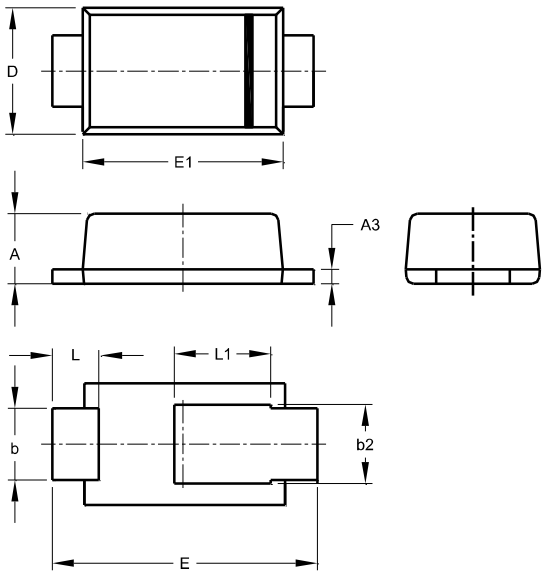
Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Marking

Type number	Marking code
DFLU1200-7-FS	F08

Package outline

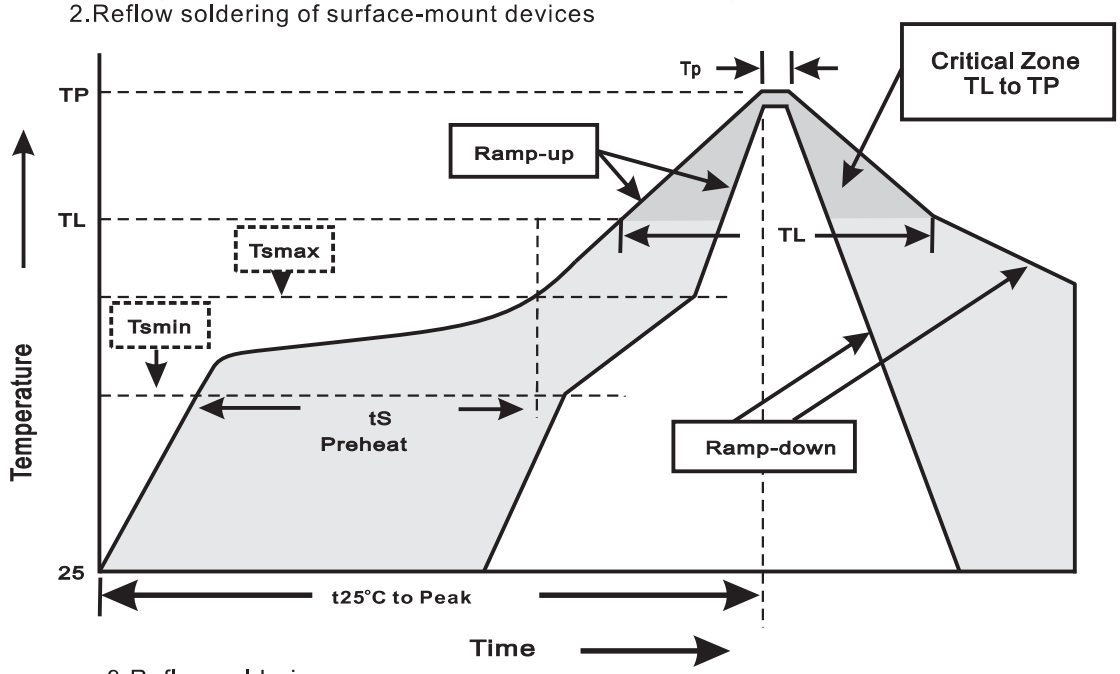
PowerDI-123



PowerDI-123		
Dim	**Min**	**Max**
A	0.85	1.05
A3	0.10	0.30
b	0.85	1.20
b2	1.05	1.35
D	1.65	1.95
E	3.50	3.90
E1	2.70	3.20
L	0.55	0.75
L1	1.40	1.60
All Dimensions in mm		

Suggested thermal profiles for soldering processes

1.Storage environment: Temperature=5°C~40°C Humidity=55%±25%
2.Reflow soldering of surface-mount devices



3.Reflow soldering

Profile Feature	Soldering Condition
Average ramp-up rate(T_L to T_P)	<3°C/sec
Preheat -Temperature Min(Tsmin) -Temperature Max(Tsmax) -Time(min to max)(t_s)	 150°C 200°C 60~120sec
Tsmax to T_L -Ramp-upRate	 <3°C/sec
Time maintained above: -Temperature(T_L) -Time(t_L)	 217°C 60~260sec
Peak Temperature(T_P)	255°C-0/+5°C
Time within 5°C of actual Peak Temperature(t_P)	10~30sec
Ramp-down Rate	<6°C/sec
Time 25°C to Peak Temperature	<6minutes