DSK22 THRU DSK220

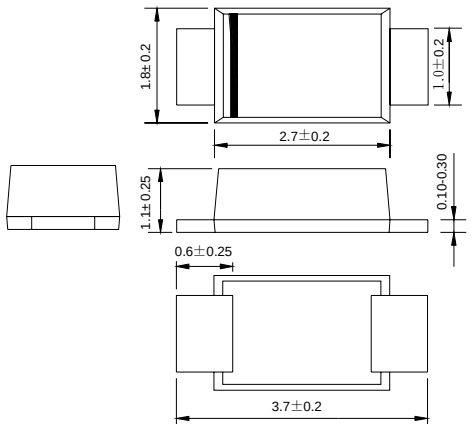
2.0A Surface Mount Schottky Barrier Rectifiers - 20V-200V

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

Package outline

SOD-123



Dimensions in inches and (millimeters)

Mechanical data

- **Case**: JEDEC SOD-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*	DSK22	DSK23	DSK24	DSK25	DSK26	DSK28	DSK210	DSK215	DSK220	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	80	100	150	200	V
Maximum RMS voltage	V_{RMS}	14	21	28	35	42	56	70	105	140	V
Maximum DC blocking voltage	V_{DC}	20	30	40	50	60	80	100	150	200	V
Maximum average forward rectified current at T_L(see fig.1)	$I_{(AV)}$	2.0									A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	45.0									A
Maximum instantaneous forward voltage at 2.0A	V_F	0.55			0.70		0.85		0.92		V
Maximum DC reverse current T_A=25℃	I_R	0.5					0.1				mA
at rated DC blocking voltage T_A=100℃		10.0					5.0		2.0		
Typical junction capacitance (NOTE 1)	C_J	220									pF
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	85									°C/W
Operating junction temperature range	T_J,	-55 to +125			-55 to +150						°C
Storage temperature range	T_{STG}	-55 to +150									°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

DSK22 THRU DSK220

2.0A Surface Mount Schottky Barrier Rectifiers - 20V-200V

Rating and characteristic curves

FIG. 1- FORWARD CURRENT DERATING CURVE

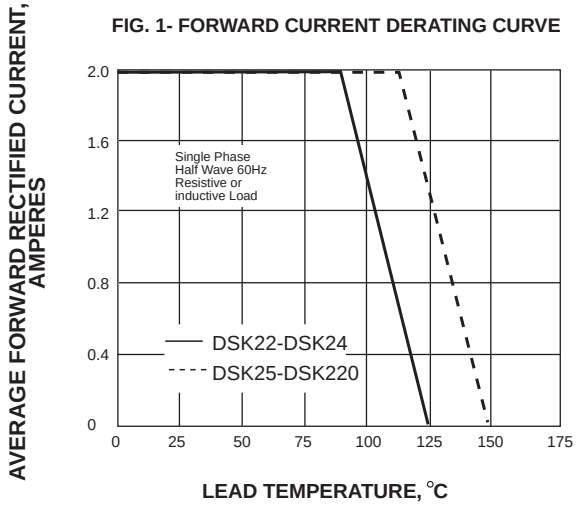


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

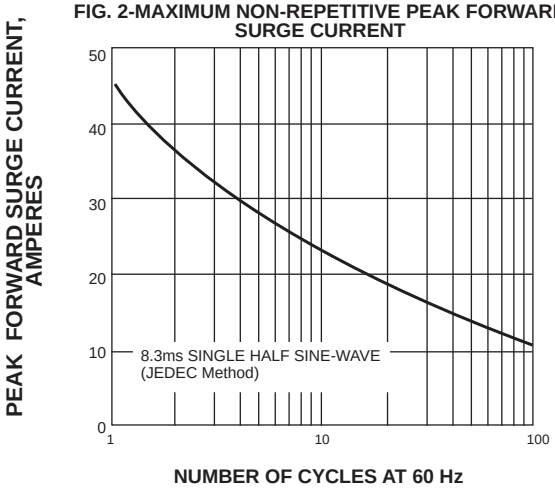


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

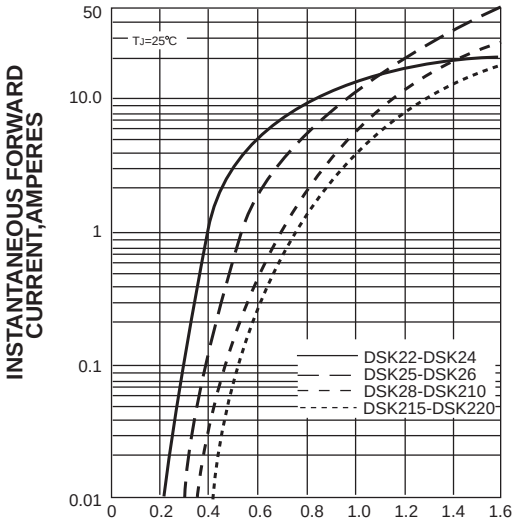


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

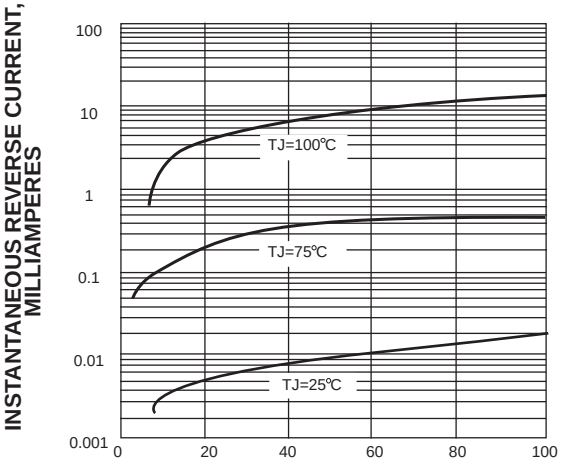


FIG. 5-TYPICAL JUNCTION CAPACITANCE

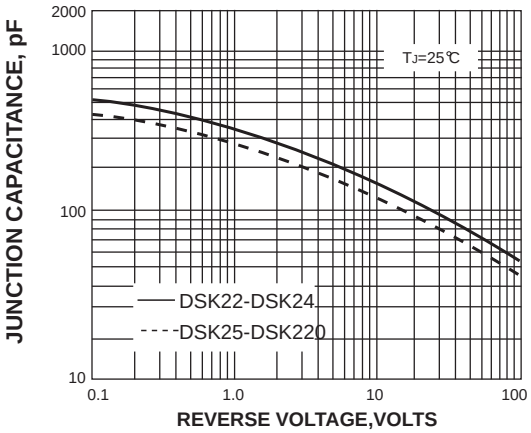
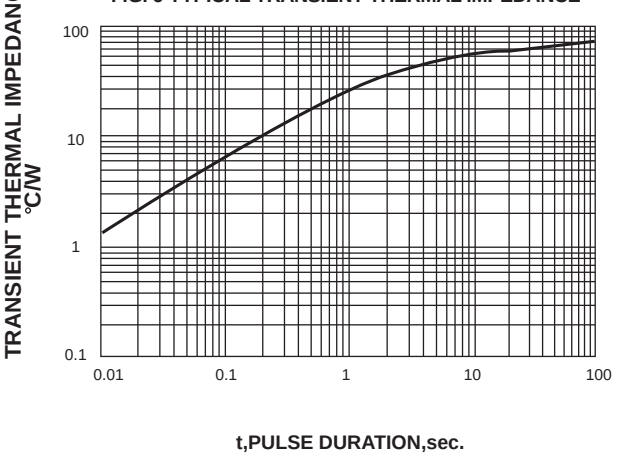


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



DSK22 THRU DSK220

2.0A Surface Mount Schottky Barrier Rectifiers - 20V-200V

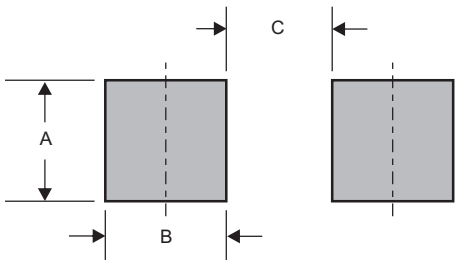
Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Marking

Type number	Marking code
DSK22	K22
DSK23	K23
DSK24	K24
DSK25	K25
DSK26	K26
DSK28	K28
DSK210	K210
DSK215	K215
DSK220	K220

Suggested solder pad layout

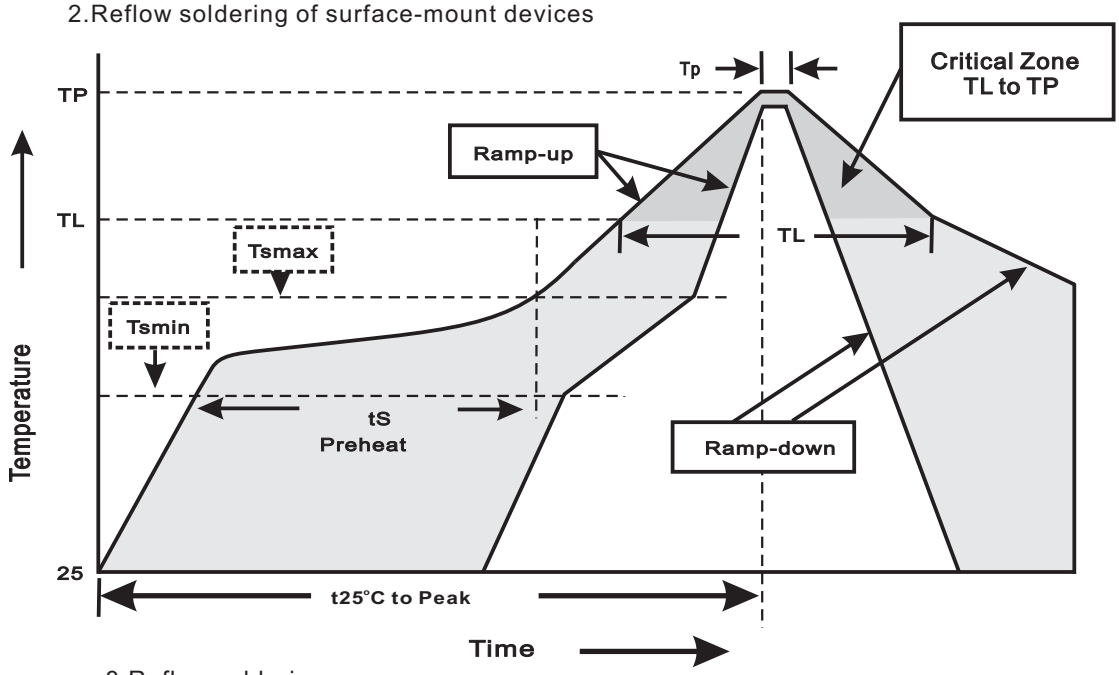


Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SOD-123	0.075 (1.90)	0.055 (1.40)	0.075 (1.90)

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