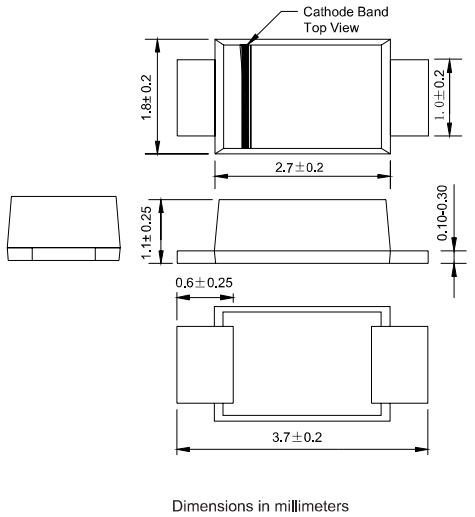
DSK12-Q1 THRU DSK120-Q1

1.0A 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: 250℃/10 seconds,0.375″(9.5mm) lead length, 5 lbs. (2.3kg) tension
- Compliant to RoHS Directive 2011/65/EU
- Compliant to Halogen-free
- Suffix "-Q1" for AEC-Q101

Package outline



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	CONDITIONS		Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	See Fig.1		I_O			1.0	A
Forward surge current	8.3ms single half sine-wave (JEDEC methode)		I_{FSM}			25	A
Reverse current	T_A = 25°C	V_R = 20V - 60V	I_R			0.5	mA
		V_R = 80V - 200V				0.1	
Reverse current	T_A = 100°C	V_R = 20V - 60V	I_R			10	mA
		V_R = 80V - 200V				5	
Thermal resistance	Junction to ambient NOTE 1		$R_{\theta JA}$		92		°C/W
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage		C_J		110		pF
Storage temperature			T_{STG}	-65		+150	°C

Note: 1.P.C.B. mounted with 0.2x0.2″(5.0x5.0mm) copper pad areas

SYMBOLS	V_{RRM} *1 (V)	V_{RMS} *2 (V)	V_R *3 (V)	V_F *4 (V)	Operating temperature T_J, (°C)
DSK12-Q1	20	14	20	0.55	-55 to +125
DSK13-Q1	30	21	30		
DSK14-Q1	40	28	40		
DSK15-Q1	50	35	50	0.70	-55 to +150
DSK16-Q1	60	42	60		
DSK18-Q1	80	56	80	0.85	
DSK110-Q1	100	70	100		
DSK115-Q1	150	105	150	0.92	
DSK120-Q1	200	140	200		

*1 Repetitive peak reverse voltage

*2 RMS voltage

*3 Continuous reverse voltage

*4 Maximum forward voltage@I_F=1.0A

Rating and characteristic curves

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

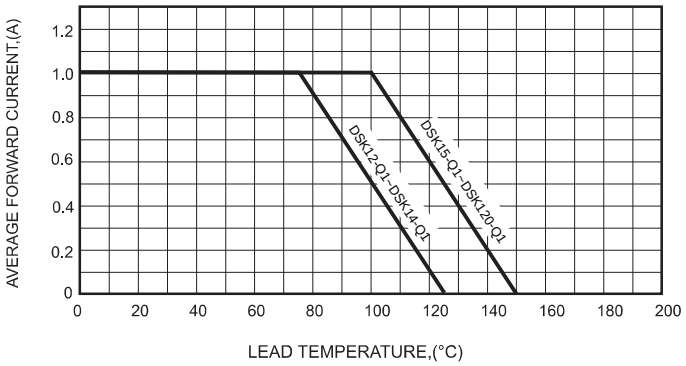


FIG.2-TYPICAL FORWARD CHARACTERISTICS

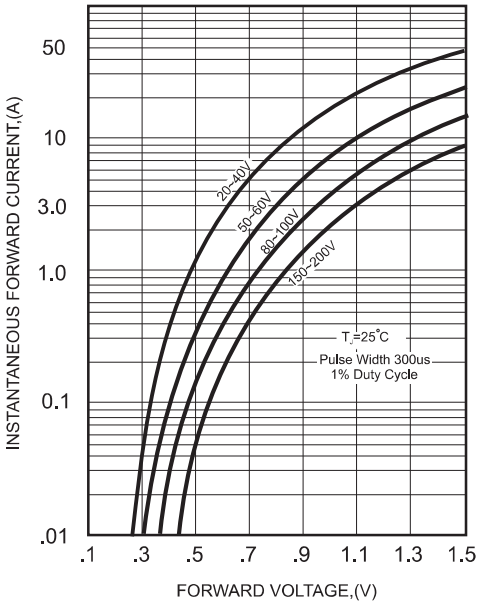


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

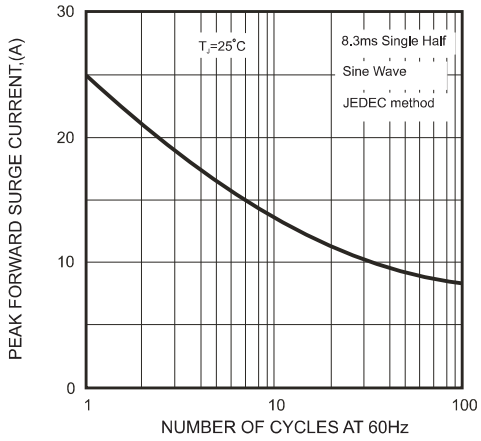


FIG.4-TYPICAL JUNCTION CAPACITANCE

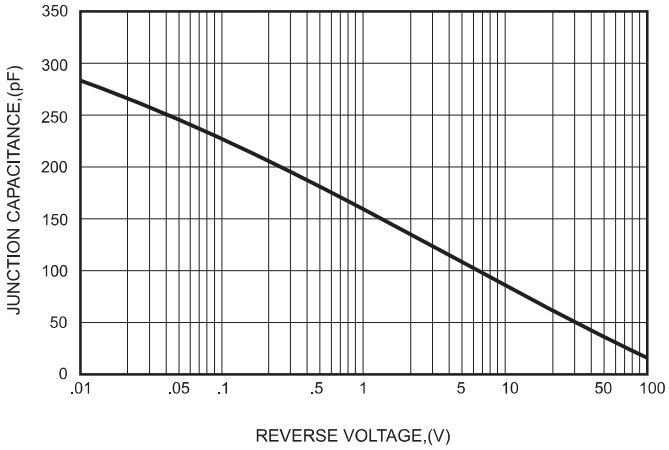
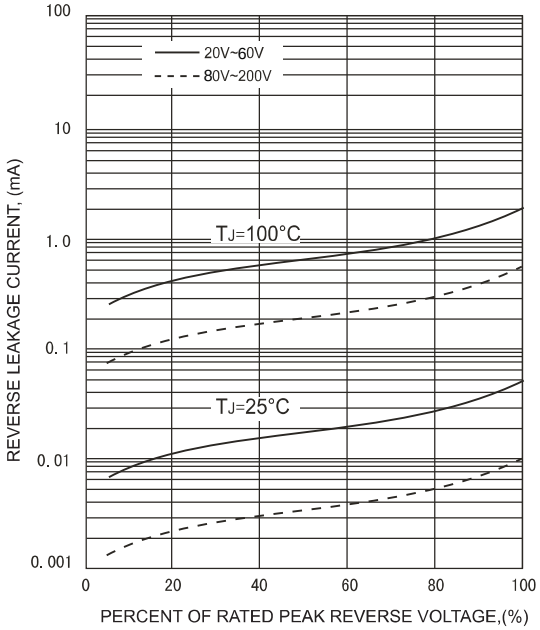
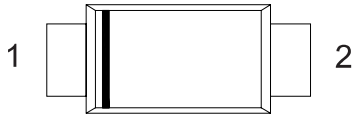


FIG.5 - TYPICAL REVERSE CHARACTERISTICS



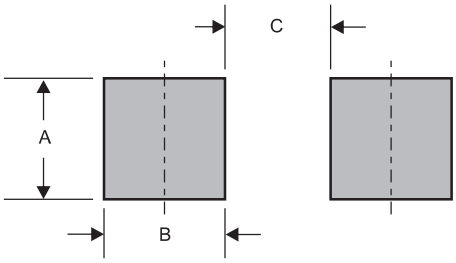
Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Marking

Type number	Marking code
DSK12-Q1	12
DSK13-Q1	13
DSK14-Q1	14
DSK15-Q1	15
DSK16-Q1	16
DSK18-Q1	18
DSK110-Q1	10
DSK115-Q1	115
DSK120-Q1	120

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)