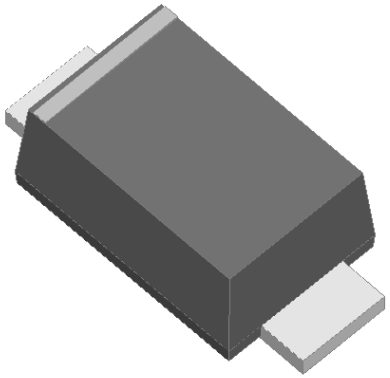
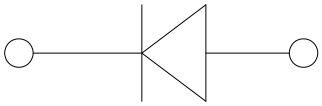
Surface Mount Schottky Rectifier

S12Q THRU S110Q





Features

- Low profile package
- Ideal for automated placement
- Guardring for overvoltage protection
- Low power losses, high efficiency
- High forward surge capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C
- Part no. with suffix “Q” means AEC-Q101 qualified

Typical Applications

For use in low voltage high frequency inverters, freewheeling, DC/DC converters, automotive and polarity protection applications.

- **Package:** SOD-123FL

■Maximum Ratings (T_a=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	S12Q	S13Q	S14Q	S15Q	S16Q	S18Q	S110Q
Device marking code			S12	S13	S14	S15	S16	S18	S110
Repetitive peak reverse voltage	V_{RRM}	V	20	30	40	50	60	80	100
Average rectified output current @60Hz sine wave, Resistance load, T_L (FIG.1)	I_O	A	1.0						
Surge(non-repetitive)forward current @60Hz half-sine wave,1 cycle, T_j=25℃	I_{FSM}	A	30						
Storage temperature	T_{stg}	℃	-55 ~+150						
Junction temperature	T_j	℃	-55 ~+125			-55 ~+150			

■Electrical Characteristics (T_a=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	S12Q	S13Q	S14Q	S15Q	S16Q	S18Q	S110Q
Maximum instantaneous forward voltage drop per diode	V_F	V	$I_{FM=}$1.0A	0.50			0.70		0.85	
Maximum DC reverse current at rated DC blocking voltage per diode @ V_{RM}=V_{RRM}	I_{RRM}	mA	T_a=25℃	0.50					0.10	
			T_a=100℃	10					5	

S12Q THRU S110Q

■Thermal Characteristics (T_a=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	S12Q	S13Q	S14Q	S15Q	S16Q	S18Q	S110Q
Thermal Resistance	$R_{\theta J-A}$	℃/W	70[1)]						
	$R_{\theta J-L}$		20[1)]						

Note:

(1)Thermal resistance between junction and ambient and between junction and lead mounted on P.C.B with 3mm*3mm copper pad areas.

■ Characteristics (Typical)

FIG1:Io-T_L Curve

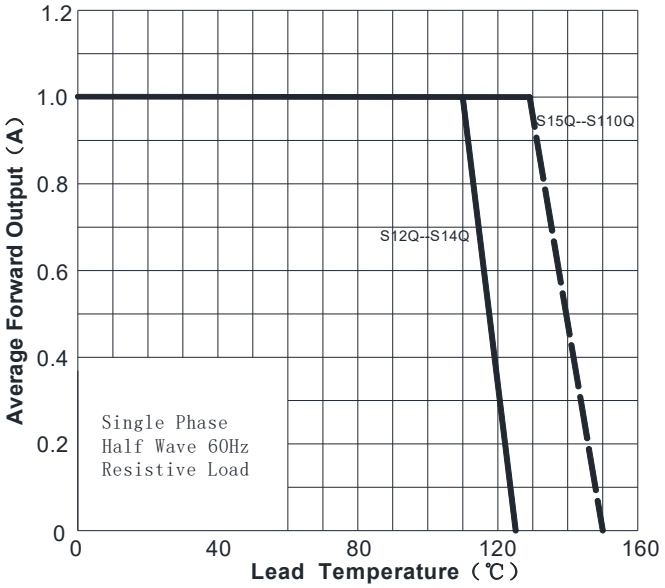


FIG2: Surge Forward Current Capability

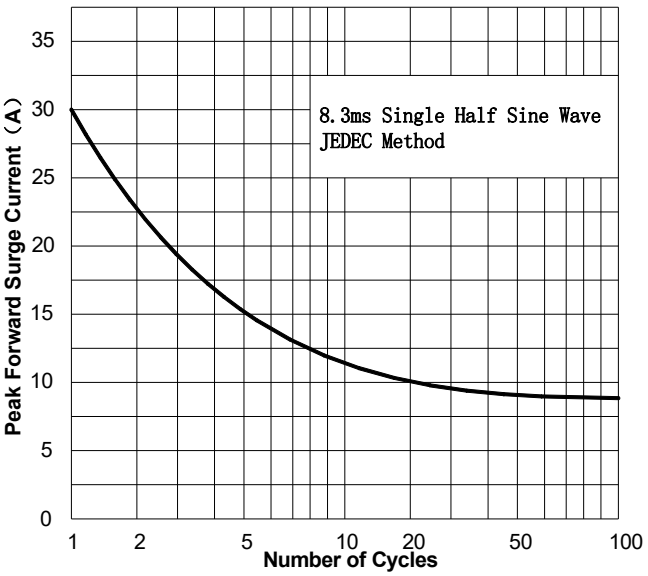


FIG3: Forward Voltage

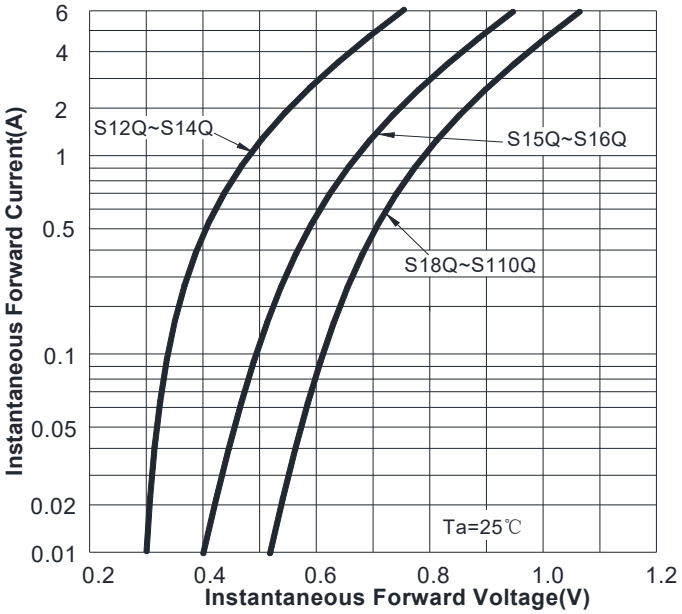
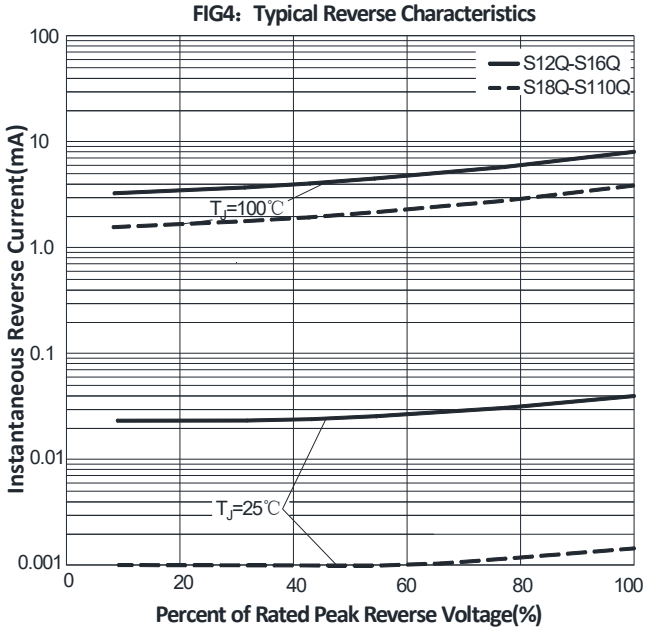
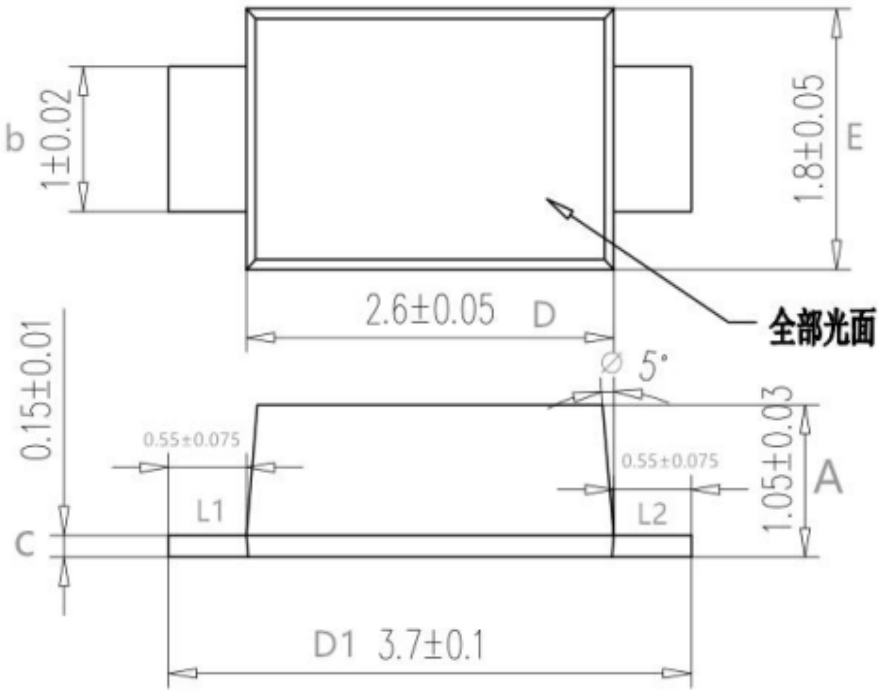


FIG4: Typical Reverse Characteristics





项目	公制（mm）	
	MIN	MAX
*A	1.02	1.08
*b	0.98	1.02
*c	0.14	0.16
*D	2.55	2.65
*D1	3.60	3.80
*E	1.75	1.85
*L1	0.475	0.625
*L2	0.475	0.625
Ø	4°	6°
带*为检验尺寸		