

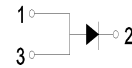
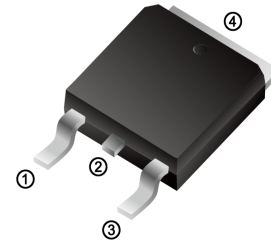


# SL20100DS

## LOW VF SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE - **100** Volts  
FORWARD CURRENT - **20.0** Amperes

### TO-252(D-PAK)



### FEATURES

- Low power loss, high efficiency
- Low forward voltage drop
- High surge capability
- High temperature soldering guaranteed
- Mounting position: any

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

PARAMETER	SYMBOL	VALUE	UNIT
Maximum repetitive peak reverse voltage	$V_{RRM}$	100	V
Maximum rms voltage	$V_{RMS}$	70	V
Maximum average forward rectified current	$I_{F(AV)}$	20	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load per diode	$I_{FSM}$	180	A
Typical junction capacitance ( $V_R=4V$ , $f=1MHz$ )	$C_J$	620	pF
Typical thermal resistance per diode (Note 1)	$R_{\theta JC}$	45	°C/W
Operating junction temperature range	$T_J$	-55 to +125	°C
Storage temperature range	$T_{STG}$	-55 to +150	°C

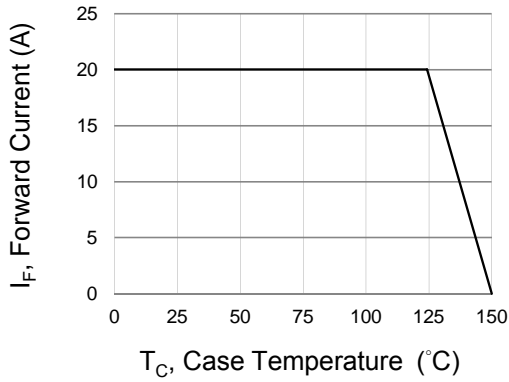
Note : 1. Mounted on infinite heatsink.

### ELECTRICAL CHARACTERISTICS( $T_A=25^\circ C$ unless otherwise noted)

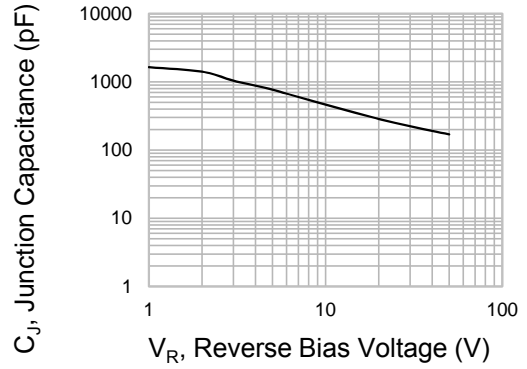
PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Breakdown voltage	$V_{BR}$	$I_R=0.5mA$	100	-	-	V
Instantaneous forward voltage	$V_F$	$I_F=2A$	-	0.42	-	V
		$I_F=5A$	-	0.47	-	
		$I_F=10A$	-	0.55	-	
		$I_F=20A$	-	0.65	0.70	
Instantaneous forward voltage	$V_F$	$I_F=2A$	-	0.36	-	V
		$I_F=5A$	-	0.42	-	
		$I_F=10A$	-	0.47	-	
		$I_F=20A$	-	0.60	-	
Reverse current per diode	$I_R$	$V_R=70V$	-	5	-	$\mu A$
		$V_R=100V$	$T_J=25^\circ C$ $T_J=125^\circ C$	-	- 5.5	100 -



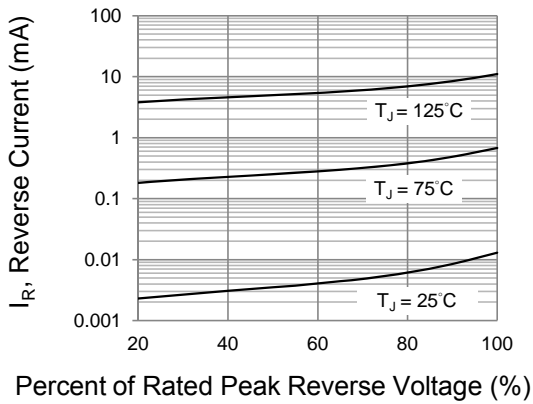
**Characteristic Curves** ( $T_A=25\text{ }^\circ\text{C}$  unless otherwise noted)



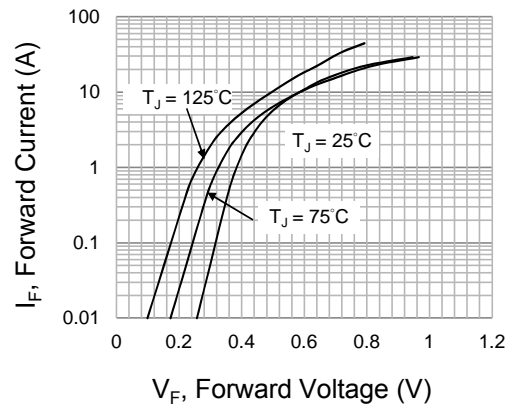
**Fig.1 Forward Current Derating Curve**



**Fig.2 Typical Junction Capacitance**



**Fig.3 Typical Reverse Characteristics**



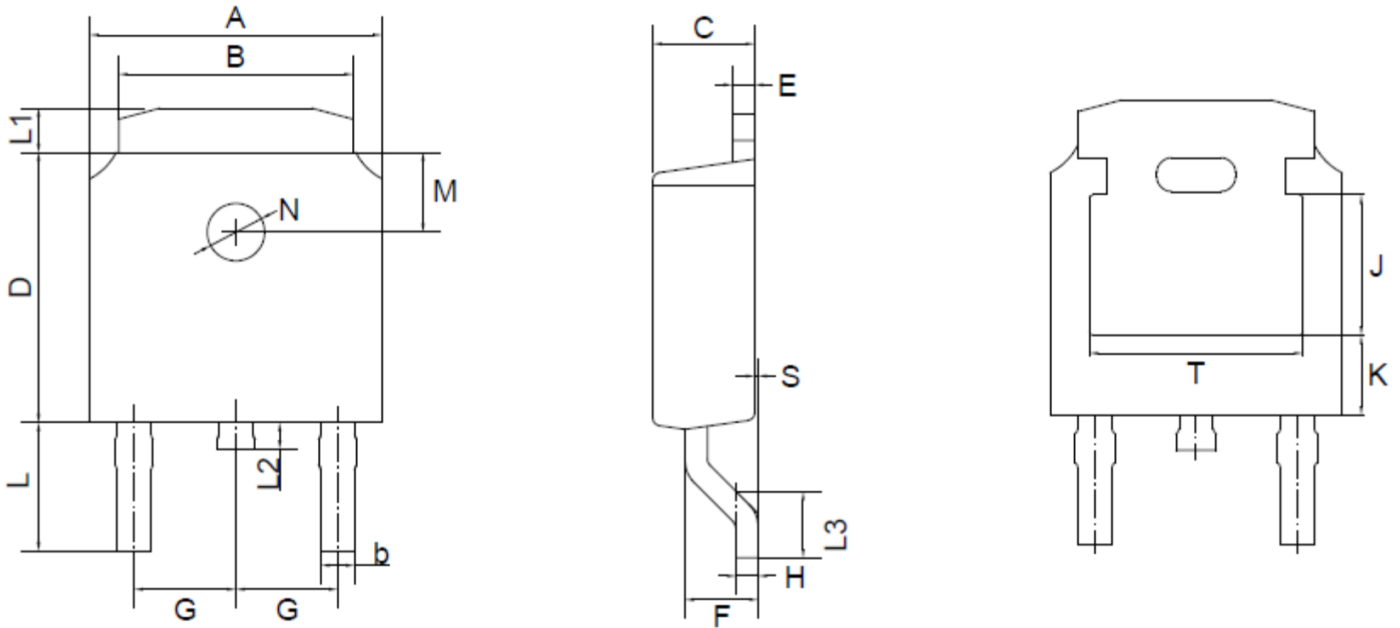
**Fig.4 Typical Forward Characteristics**



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## LOW VF SCHOTTKY BARRIER RECTIFIERS

### TO-252(D-PAK) Package Outline Dimensions



TO-252(D-PAK) mechanical data

UNIT		A	B	b	C	D	E	F	G	H	L	L1	L2	L3	S	M	N	J	K	T
mm	max	6.7	5.5	0.8	2.5	6.3	0.6	1.8	2.29	0.55	3.1	1.2	1.0	1.75	0.1	1.8	1.3	3.16	1.80	4.83
	min	6.3	5.1	0.3	2.1	5.9	0.4	1.3	TYPICAL	0.45	2.7	0.8	0.6	1.40	0.0	TYPICAL	TYPICAL	ref.	ref.	ref.
mil	max	264	217	31	98	248	24	71	90	22	122	47	39	69	4	71	51	124	71	190
	min	248	201	12	83	232	16	51	TYPICAL	18	106	31	24	55	0	TYPICAL	TYPICAL	ref.	ref.	ref.

