

RoHS Compliant Product  
A suffix of "-C" specifies halogen and lead free

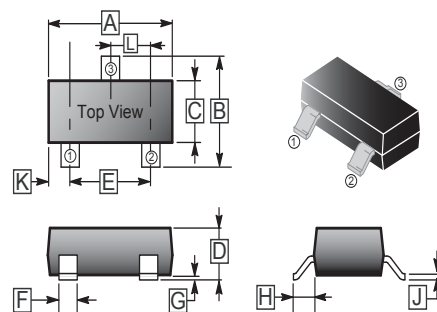
## FEATURES

- RoHS Compliant Product
- High Reverse Breakdown Voltage
- Ultra high speed Switching
- High Conductance

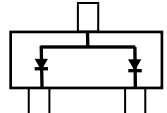
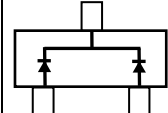
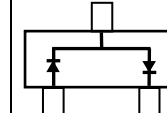
## MECHANICAL DATA

- Case: SOT-23, Molded Plastic  
Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: See Diagrams Below
- Weight: 0.008 g (approx.)
- Mounting Position: Any

### SOT-23



## MARKING

Part Name	MMBD318A	MMBD318C	MMBD318S
Marking	KAD / LD7	KAC / LD8	KAE / LD9
Circuit			

REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.80	3.04	G	0.09	0.18
B	2.10	2.55	H	0.45	0.60
C	1.20	1.40	J	0.08	0.177
D	0.89	1.15	K	0.6 REF.	
E	1.78	2.04	L	0.89	1.02
F	0.30	0.50			

## PACKAGE INFORMATION

Package	MPQ	LeaderSize
SOT-23	3K	7' inch

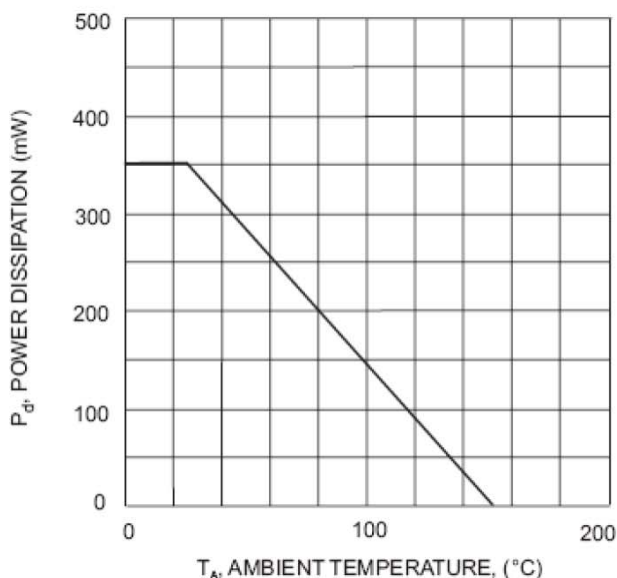
## MAXIMUM RATINGS (T<sub>A</sub> = 25°C unless otherwise specified)

Parameter	Symbol	Ratings	Unit
Repetitive peak reverse voltage	V <sub>RRM</sub>	350	V
Working peak reverse voltage Continuous Reverse voltage	V <sub>RWM</sub> V <sub>R</sub>	300	V
RMS reverse voltage	V <sub>R(RMS)</sub>	212	V
Forward continuous current	I <sub>F</sub>	225	mA
Peak repetitive forward current	I <sub>FRM</sub>	625	mA
Non-Repetitive peak forward surge current	@t=1.0μs	4	A
	@t=1.0s	1	
Power dissipation	P <sub>d</sub>	350	mW
Thermal resistance junction to ambient air	R <sub>θJA</sub>	357	°C/W
Operating and storage temperature range	T <sub>j</sub> , T <sub>STG</sub>	-65 ~ +150	°C

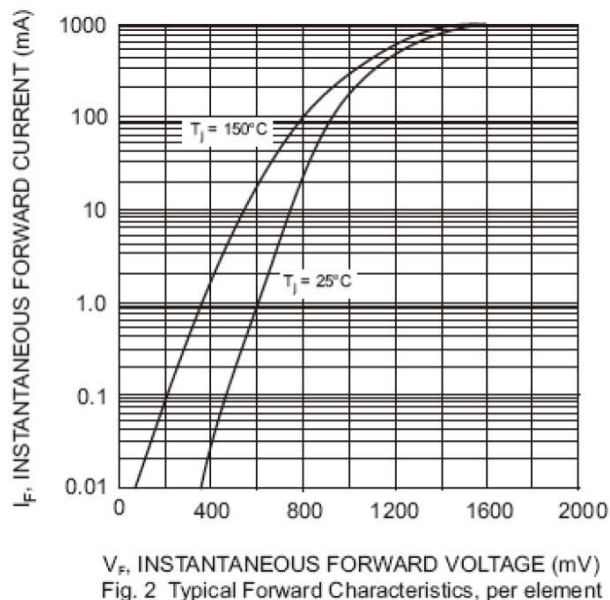
**ELECTRICAL CHARACTERISTICS** ( $T_A = 25^\circ\text{C}$  unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Reverse Breakdown Voltage	$V_{(BR)}$	350			V	$I_R = 150\mu\text{A}$
Forward Voltage	$V_F$		0.78	0.87	mV	$I_F = 20\text{mA}$
			0.93	1.0		$I_F = 100\text{mA}$
			1.03	1.25		$I_F = 200\text{mA}$
Reverse Current	$I_R$		30	100	nA	$V_R = 240\text{V}$
			35	100	$\mu\text{A}$	$V_R = 240\text{V}$ $T_j = 150^\circ\text{C}$
Total capacitance	$C_T$		1.0	5.0	pF	$V_R = 0\text{V}$ , $f = 1\text{MHz}$
Reverse Recovery Time	$t_{rr}$			50	ns	$I_F = I_R = 30\text{mA}$ , $I_{rr} = 0.1 \times I_R$ , $R_L = 100\Omega$

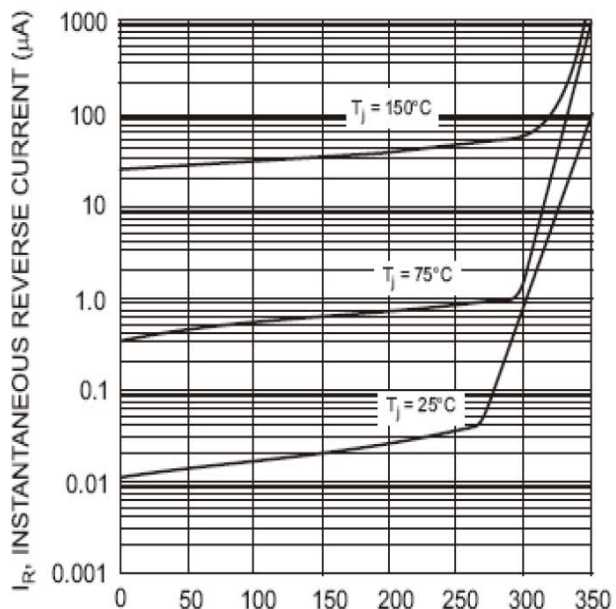
**CHARACTERISTICS CURVE**



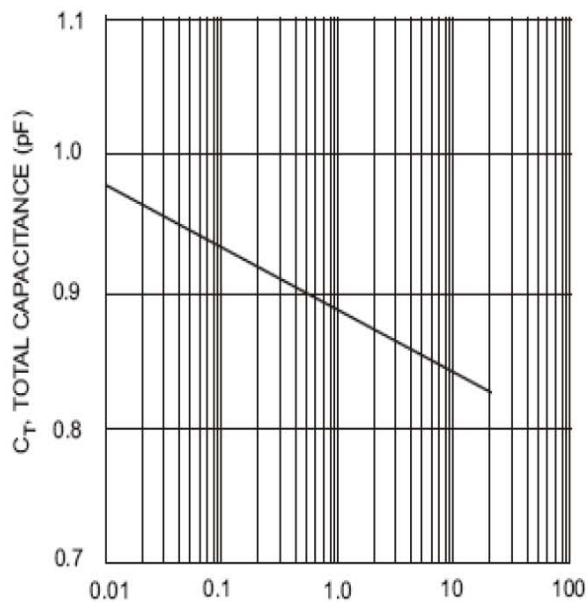
$T_A$ , AMBIENT TEMPERATURE, (°C)  
Fig. 1 Power Derating Curve, total package



$V_F$ , INSTANTANEOUS FORWARD VOLTAGE (mV)  
Fig. 2 Typical Forward Characteristics, per element



$V_R$ , INSTANTANEOUS REVERSE VOLTAGE (V)  
Fig. 3 Typical Reverse Characteristics, per element



$V_R$ , REVERSE VOLTAGE (V)  
Fig. 4 Typical Total Capacitance vs. Reverse Voltage, per element