

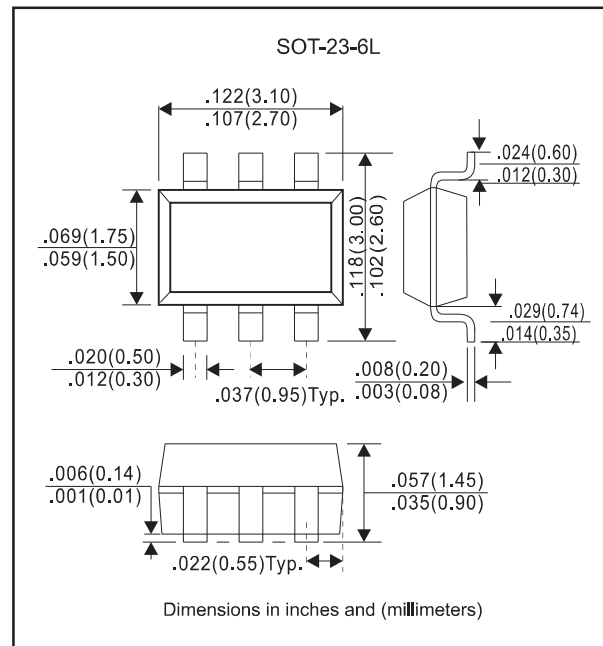
Features

- Fast switching speed
- High conductance
- Compliant to Halogen-free
- Suffix "-Q1" for AEC-Q101

Mechanical data

- Epoxy: UL94-V0 rated flame retardant
- Case : Molded plastic, SOT-23-6L
- Terminals : Matte tin-plated leads; solderability-per MIL-STD-202, Method 208
- Mounting Position : Any

Package outline



Maximum ratings (AT $T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	UNIT	VALUE
Repetitive peak reverse voltage	V_{RRM}	V	250
Reverse voltage	V_R	V	200
Average forward current	I_{FAV}	mA	200
Non-repetitive peak forward surge current, $t_p=10\text{ms}$	I_{FSM}	A	2
Power dissipation	P_D	mW	300
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	$^\circ\text{C/W}$	417
Maximum junction temperature	T_j	$^\circ\text{C}$	-55 ~+150
Storage temperature range	T_{stg}	$^\circ\text{C}$	-55 ~+150

Electrical characteristics (AT $T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER	Symbol	UNIT	Conditions	Min	Max
Breakdown Voltage	V_R	V	$I_R=100\mu\text{A}$	200	
Forward Voltage	V_F	V	$I_F=100\text{mA}$		1.00
			$I_F=200\text{mA}$		1.25
Reverse Leakage Current	I_R	μA	$V_R=200\text{V}, T_J=25^\circ\text{C}$		0.1
			$V_R=200\text{V}, T_J=150^\circ\text{C}$		100
Capacitance	C_j	pF	$V_R=0\text{V}, f=1\text{MHz}$		5
Reverse Recovery Time	t_{rr}	ns	$I_F=I_R=30\text{mA}, I_{rr}=3\text{mA}, R_L=100\Omega$		50

Rating and characteristics curves

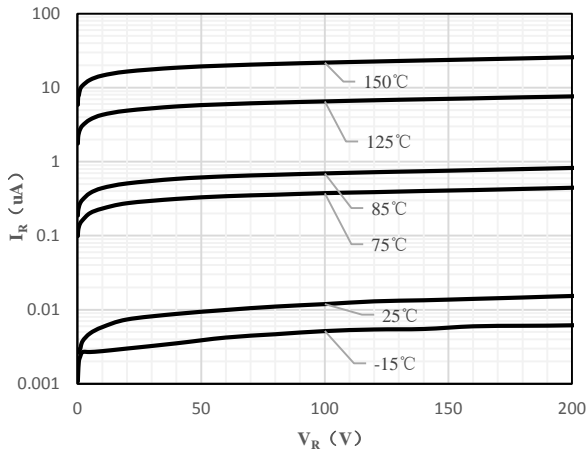


Fig 1 Typical Reverse Characteristic

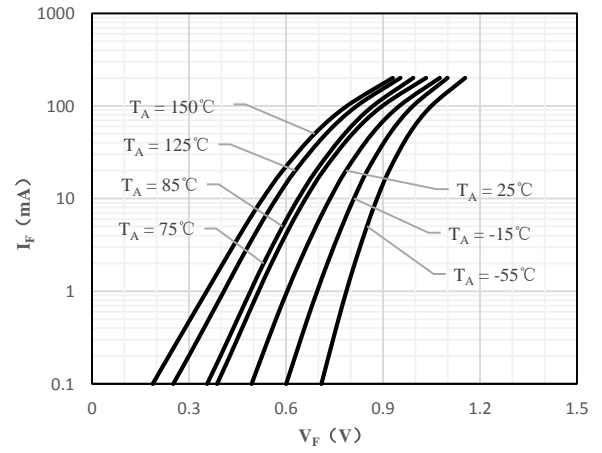


Fig 2 Typical Forward Characteristics

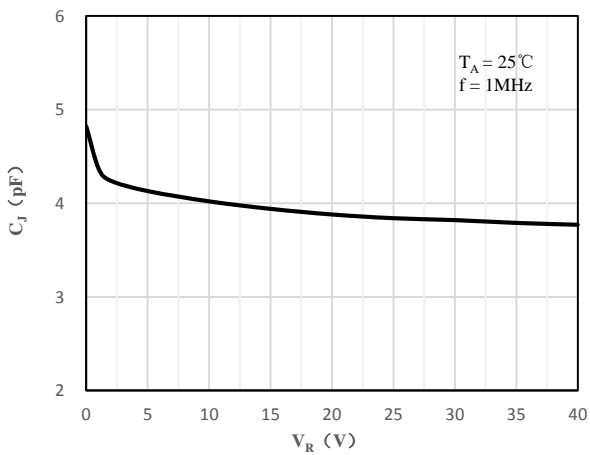


Fig 3 Capacitance vs. Reverse Voltage

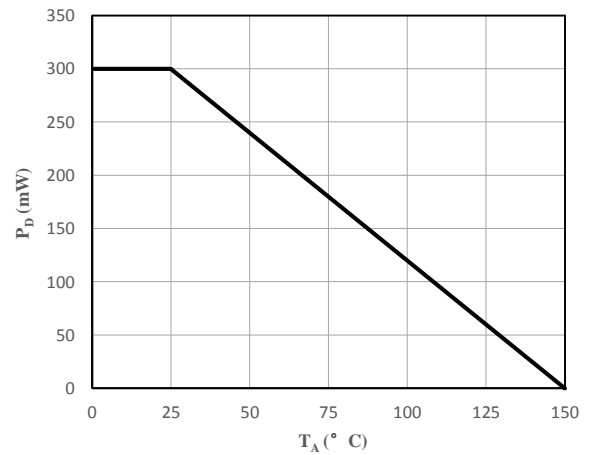
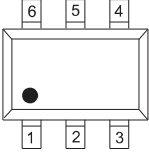
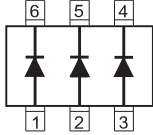
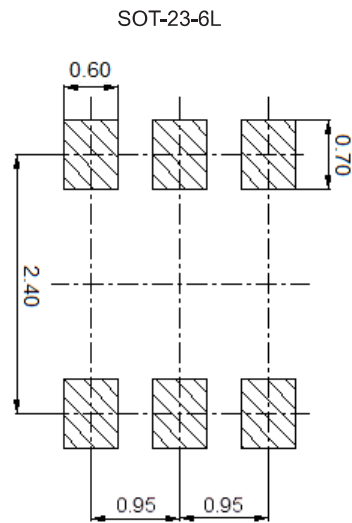


Fig 4 Power Derating Curve

Pinning information

Type number	Marking code	Simplified outline	Symbol
BAS21SF-Q1	B5R		

Suggested solder pad layout



Dimensions in inches and (millimeters)