

P-CHANNEL ENHANCEMENT MODE FIELD EFFECT TRANSISTOR

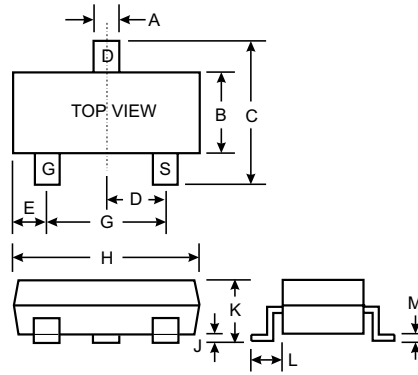
NEW PRODUCT

Features

- Low On-Resistance
- Low Gate Threshold Voltage
- Low Input Capacitance
- Fast Switching Speed

Mechanical Data

- Case: SOT-323, Molded Plastic
- Terminals: Solderable per MIL-STD-202, Method 208
- Terminal Connections: See Diagram
- Marking Code: K84
- Weight: 0.006 grams (approx.)



SOT-323		
Dim	Min	Max
A	0.30	0.40
B	1.15	1.35
C	2.00	2.20
D	0.65 Nominal	
E	0.30	0.40
G	1.20	1.40
H	1.80	2.20
J	0.0	0.10
K	0.90	1.00
L	0.25	0.40
M	0.10	0.25
All Dimensions in mm		

Maximum Ratings @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	BSS84W	Units
Drain-Source Voltage	V _{DSS}	-50	V
Drain-Gate Voltage (Note 3)	V _{DGR}	-50	V
Gate-Source Voltage	V _{GSS}	±20	V
Drain Current (Note 1)	I _D	-130	mA
Total Power Dissipation (Note 1)	P _d	200	mW
Thermal Resistance, Junction to Ambient	R _{θJA}	625	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +150	°C

Electrical Characteristics @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
OFF CHARACTERISTICS (Note 2)						
Drain-Source Breakdown Voltage	BV _{DSS}	-50	-75	—	V	V _{GS} = 0V, I _D = -250μA
Zero Gate Voltage Drain Current	I _{DSS}	—	—	-15	μA	V _{DS} = -50V, V _{GS} = 0V, T _J = 25°C
		—	—	-60	μA	V _{DS} = -50V, V _{GS} = 0V, T _J = 125°C
		—	—	-100	nA	V _{DS} = -25V, V _{GS} = 0V, T _J = 25°C
Gate-Body Leakage	I _{GSS}	—	—	±10	nA	V _{GS} = ±20V, V _{DS} = 0V
ON CHARACTERISTICS (Note 2)						
Gate Threshold Voltage	V _{GS(th)}	-0.8	-1.6	-2.0	V	V _{DS} = V _{GS} , I _D = -1mA
Static Drain-Source On-Resistance	R _{DS(ON)}	—	6	10	Ω	V _{GS} = -5V, I _D = 0.100A
Forward Transconductance	g _{FS}	.05	—	—	S	V _{DS} = -25V, I _D = 0.1A
DYNAMIC CHARACTERISTICS						
Input Capacitance	C _{iss}	—	—	45	pF	V _{DS} = -25V, V _{GS} = 0V f = 1.0MHz
Output Capacitance	C _{oss}	—	—	25	pF	
Reverse Transfer Capacitance	C _{rss}	—	—	12	pF	
SWITCHING CHARACTERISTICS						
Turn-On Delay Time	t _{D(ON)}	—	10	—	ns	V _{DD} = -30V, I _D = -0.27A, R _{GEN} = 50Ω, V _{GS} = -10V
Turn-Off Delay Time	t _{D(OFF)}	—	18	—	ns	

Note: 1. Valid provided that terminals are kept at specified ambient temperature.
2. Pulse width ≤ 300μs, duty cycle ≤ 2%.