BS250PSTOB Datasheet

DiGi Electronics Part Number	BS250PSTOB-DG
Manufacturer	Diodes Incorporated
Manufacturer Product Number	BS250PSTOB
Description	MOSFET P-CH 45V 230MA E-LINE
Detailed Description	P-Channel 45 V 230mA (Ta) 700mW (Ta) Through Hole E-Line (TO-92 compatible)

https://www.DiGi-Electronics.com

Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

Purchase and inquiry

Manufacturer Product Number:	Manufacturer:
BS250PSTOB	Diodes Incorporated
Series:	Product Status:
-	Obsolete
FET Type:	Technology:
P-Channel	MOSFET (Metal Oxide)
Drain to Source Voltage (Vdss):	Current - Continuous Drain (Id) @ 25°C:
45 V	230mA (Ta)
Drive Voltage (Max Rds On, Min Rds On):	Rds On (Max) @ Id, Vgs:
10V	14Ohm @ 200mA, 10V
Vgs(th) (Max) @ Id:	Vgs (Max):
3.5V @ 1mA	±20V
Input Capacitance (Ciss) (Max) @ Vds:	FET Feature:
60 pF @ 10 V	-
Power Dissipation (Max):	Operating Temperature:
700mW (Ta)	-55°C ~ 150°C (TJ)
Mounting Type:	Supplier Device Package:
Through Hole	E-Line (TO-92 compatible)
Package / Case:	Base Product Number:
E-Line-3	BS250

Environmental & Export classification

RoHS Status:	Moisture Sensitivity Level (MSL):
ROHS3 Compliant	1 (Unlimited)
REACH Status:	ECCN:
REACH Unaffected	EAR99
HTSUS:	
8541.21.0095	

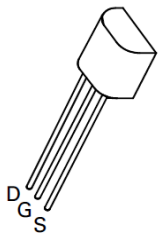
BS250P

P-CHANNEL ENHANCEMENT MODE VERTICAL DMOS FET

Features and Benefits

- V_{DS} = 45V
- $R_{DS(ON)}$ = 14Ω
- **For automotive applications requiring specific change control (i.e. parts qualified to AEC-Q101, PPAP capable, and manufactured in IATF 16949 certified facilities), please contact us or your local Diodes representative.**
- **https://www.diodes.com/quality/product-definitions/**

REFER TO ZVP2106A FOR GRAPHS



E-Line
TO92 Compatible

Absolute Maximum Ratings (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	-45	V
Continuous Drain Current at T_A = +25°C	I_D	-230	mA
Pulsed Drain Current	I_{DM}	-3	A
Gate Source Voltage	V_{GS}	± 20	V
Power Dissipation at T_A = +25°C	P_{TOT}	700	mW
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
Drain-Source Breakdown Voltage	BV_{DSS}	-45	—	—	V	I_D = -100μA, V_{GS} = 0V
Gate-Source Threshold Voltage	$V_{GS(TH)}$	-1	—	-3.5	V	I_D = -1mA, V_{DS} = V_{GS}
Gate-Body Leakage	I_{GSS}	—	—	-20	nA	V_{GS} = -15V, V_{DS} = 0V
Zero Gate Voltage Drain Current	I_{DSS}	—	—	-500	nA	V_{GS} = 0V, V_{DS} = -25V
Static Drain-Source On-State Resistance (Note 1)	$R_{DS(ON)}$	—	—	14	Ω	V_{GS} = -10V, I_D = -200mA
Forward Transconductance (Note 1) (Note 2)	g_{fs}	—	150	—	ms	V_{DS} = -10V, I_D = -200mA
Input Capacitance (Note 2)	C_{iss}	—	60	—	pF	V_{GS} = 0V, V_{DS} = -10V, f = 1.0MHz
Turn-On Time (Note 2) (Note 3)	$t_{(ON)}$	—	—	20	ns	V_{DD} ≈ -25V, I_D = -500mA
Turn-Off Time (Note 2) (Note 3)	$t_{(OFF)}$	—	—	20	ns	

Notes:
1. Measured under pulsed conditions. Pulse Width = 300μs. Duty cycle ≤2%.
2. Sample test.
3. Switching times measured with a 50Ω source impedance and <5ns rise time on a pulse generator.

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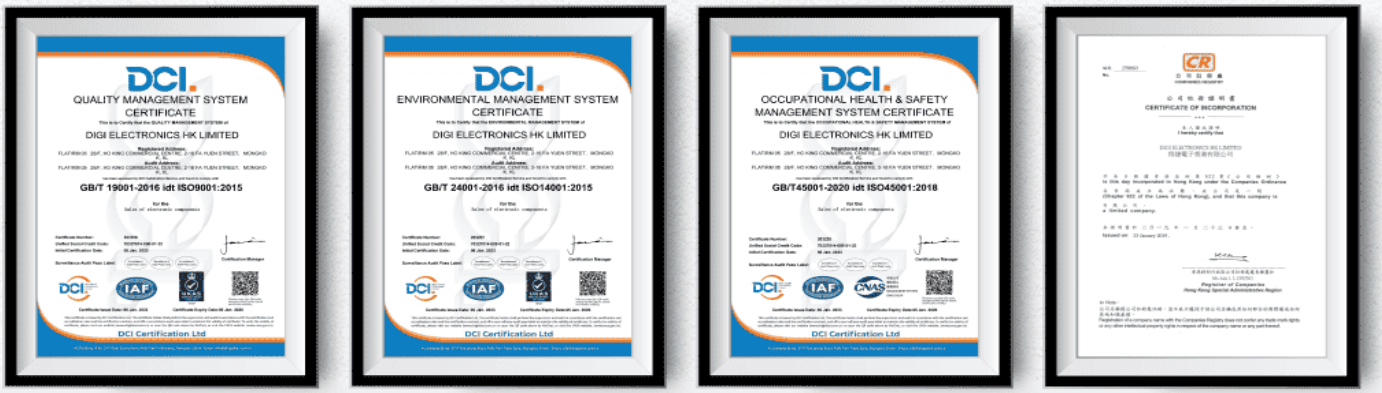

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