

Technical Data

TRANSISTOR



maximum ratings

VDS	50.0	V	NO.	BUZ12
VDG	50.0	V	TYPE	V-MOS
VGS	± 20.0	V		
ID	42.0	A		
IDM	168.0	A	CASE	TO-220AB
IG		A		
Max. Power Dissipation (PT) at TC = 25 °C	125.0	W		
Max. Thermal Resistance (Rth J-C)	1.0	°C/W		
Max. Junction Temperature (TJ)	150.0	°C		

PERFORMANCE CHARACTERISTICS at T_C = 25°C, unless otherwise noted

NO.	SYMBOL	CONDITIONS	MIN.	MAX.	UNITS
1.	BVDSS	ID = 250.0 µA (1)	50.0	-	V
2.	IDSS	VDS = 50.0 V	-	250.0	µA
3.	IDSS	VDS = 50.0 V, TJ = 125.0° C	-	1.0	mA
4.	IGSS	VGS = ± 20.0 V	-	100.0	nA
5.	VGS(TH)	ID = 1.0 mA	2.1	4.0	V
6.	RDS(ON)	ID = 32.0 A, VGS = 10.0 V	-	0.028	Ω
7.	/Yfs/	VDS = 2.5 V, ID = 32.0 A (2)	8.0	-	S
8.	Ciss	VDS = 25.0 V, f = 1.0 MHz (2)	-	2.0	nF
9.	Coss	VDS = 25.0 V, f = 1.0 MHz (2)	-	1.0	nF
10.	Crss	VDS = 25.0 V, f = 1.0 MHz (2)	-	0.4	nF
11.	td(ON)	VDD = 30.0 V, ID = 3.0 A, VGS = 10.0 V (2)	-	50.0	ns
12.	tr	VDD = 30.0 V, ID = 3.0 A, VGS = 10.0 V (2)	-	130.0	ns
13.	td(OFF)	VDD = 30.0 V, ID = 3.0 A, VGS = 10.0 V (2)	-	280.0	ns
14.	tf	VDD = 30.0 V, ID = 3.0 A, VGS = 10.0 V (2)	-	180.0	ns
15.					
16.					
17.					
18.					
19.					
20.					

Notes (1)pulse-tested tp ≤ 300 µs, duty cycle ≤ 2 %
(2)typical value

DIMENSIONS
in mm

Marking BUZ12
Customer GENERAL PURPOSE

