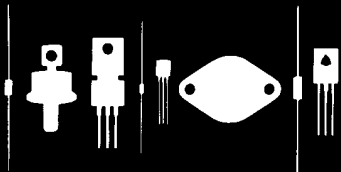


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145 Adams Avenue
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2N5638
2N5639
2N5640

N CHANNEL SILICON
FIELD EFFECT TRANSISTOR

JEDEC TO-92 CASE (DSG)

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N5638 series types are silicon N channel field effect transistors designed for switching applications.

MAXIMUM RATINGS (TA=25°C unless otherwise noted)

	<u>SYMBOL</u>		<u>UNIT</u>
Drain-Gate Voltage	VGD	30	V
Drain-Source Voltage	VDS	30	V
Reverse Gate-Source Voltage	VGSR	30	V
Gate Current	IG	10	mA
Power Dissipation	PD	310	mW
Operating and Storage Junction Temperature	TJ, TSTG	-65 TO +150	°C

ELECTRICAL CHARACTERISTICS (TA=25°C unless otherwise noted)

<u>SYMBOL</u>	<u>TEST CONDITIONS</u>	2N5638		2N5639		2N5640		<u>UNIT</u>
		<u>MIN</u>	<u>MAX</u>	<u>MIN</u>	<u>MAX</u>	<u>MIN</u>	<u>MAX</u>	
IGSS	VGS=15V		1.0		1.0		1.0	nA
IGSS	VGS=15V, TA=100°C		1.0		1.0		1.0	µA
IDSS	VDS=20V	50		25		5.0		mA
ID(OFF)	VDS=15V, VGS=12V		1.0		-		-	nA
ID(OFF)	VDS=15V, VGS=8.0V		-		1.0		-	nA
ID(OFF)	VDS=15V, VGS=6.0V		-		-		1.0	nA
ID(OFF)	VDS=15V, VGS=12V, TA=100°C		1.0		-		-	µA
ID(OFF)	VDS=15V, VGS=8.0V, TA=100°C		-		1.0		-	µA
ID(OFF)	VDS=15V, VGS=6.0V, TA=100°C		-		-		1.0	µA
BVGSS	IG=10µA	30		30		30		V
VDS(ON)	ID=12mA		0.5		-		-	V
VDS(ON)	ID=6.0mA		-		0.5		-	V
VDS(ON)	ID=3.0mA		-		-		0.5	V
rDS(ON)	ID=1.0mA		30		60		100	Ω
rds(ON)	VGS=0, ID=0, f=1.0kHz		30		60		100	Ω
Ciss	VGS=12V, VDS=0, f=1.0MHz		10		10		10	pF
Crss	VGS=12V, VDS=0, f=1.0MHz		4.0		4.0		4.0	pF
td(ON)	VDD=10V, VGS(OFF)=10V, ID(ON)=12mA, RG=50Ω		4.0		-		-	ns
td(ON)	VDD=10V, VGS(OFF)=10V, ID(ON)=6.0mA, RG=50Ω		-		6.0		-	ns
td(ON)	VDD=10V, VGS(OFF)=10V, ID(ON)=3.0mA, RG=50Ω		-		-		8.0	ns
tr	VDD=10V, VGS(OFF)=10V, ID(ON)=12mA, RG=50Ω		5.0		-		-	ns
tr	VDD=10V, VGS(OFF)=10V, ID(ON)=6.0mA, RG=50Ω		-		8.0		-	ns
tr	VDD=10V, VGS(OFF)=10V, ID(ON)=3.0mA, RG=50Ω		-		-		10	ns
td(OFF)	VDD=10V, VGS(OFF)=10V, ID(ON)=12mA, RG=50Ω		5.0		-		-	ns
td(OFF)	VDD=10V, VGS(OFF)=10V, ID(ON)=6.0mA, RG=50Ω		-		10		-	ns
td(OFF)	VDD=10V, VGS(OFF)=10V, ID(ON)=3.0mA, RG=50Ω		-		-		15	ns
tf	VDD=10V, VGS(OFF)=10V, ID(ON)=12mA, RG=50Ω		10		-		-	ns
tf	VDD=10V, VGS(OFF)=10V, ID(ON)=6.0mA, RG=50Ω		-		20		-	ns
tf	VDD=10V, VGS(OFF)=10V, ID(ON)=3.0mA, RG=50Ω		-		-		30	ns