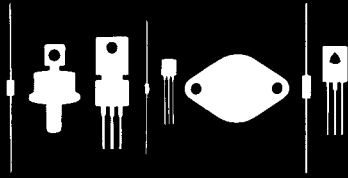


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145 Adams Avenue
Hauppauge, New York 11788



2N5114
2N5115
2N5116

P CHANNEL SILICON
FIELD EFFECT TRANSISTOR

JEDEC TO-18 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N5114 series types are silicon P-Channel field effect transistors designed for switching applications.

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

	SYMBOL		UNIT
Gate-Drain Voltage	V _{GD}	30	V
Gate-Source Voltage	V _{GS}	30	V
Gate Current	I _G	50	mA
Power Dissipation	P _D	500	mW
Operating and Storage Junction Temperature	T _J , T _{STG}	-65 TO +200	°C

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

SYMBOL	TEST CONDITIONS	2N5114		2N5115		2N5116		UNIT
		MIN	MAX	MIN	MAX	MIN	MAX	
I _{GSS}	V _{GS} =20V		500		500		500	pA
I _{GSS}	V _{GS} =20V, TA=150°C		1.0		1.0		1.0	μA
I _{DSS}	V _{DS} =18V	30	90	-	-	-	-	mA
I _{DSS}	V _{DS} =15V	-	-	15	60	5.0	25	mA
I _{D(OFF)}	V _{DS} =15V, V _{GS} =12V		500		-		-	pA
I _{D(OFF)}	V _{DS} =15V, V _{GS} =7.0V		-		500		-	pA
I _{D(OFF)}	V _{DS} =15V, V _{GS} =5.0V		-		-		500	pA
I _{D(OFF)}	V _{DS} =15V, V _{GS} =12V, TA=150°C		1.0		-		-	μA
I _{D(OFF)}	V _{DS} =15V, V _{GS} =7.0V, TA=150°C		-		1.0		-	μA
I _{D(OFF)}	V _{DS} =15V, V _{GS} =5.0V, TA=150°C		-		-		1.0	μA
BV _{GSS}	I _G =1.0μA	30		30		30		V
V _{GS(OFF)}	V _{DS} =15V, I _D =1.0nA	5.0	10	3.0	6.0	1.0	4.0	V
V _{GS(f)}	I _G =1.0mA		1.0		1.0		1.0	V
V _{DS(ON)}	I _D =15mA		1.3		-		-	V
V _{DS(ON)}	I _D =7.0mA		-		0.8		-	V
V _{DS(ON)}	I _D =3.0mA		-		-		0.6	V
r _{DS(ON)}	I _D =1.0mA, V _{GS} =0		75		100		150	Ω
r _{ds(ON)}	V _{GS} =0, I _D =0, f=1.0kHz		75		100		150	Ω
C _{iss}	V _{DS} =15V, V _{GS} =0, f=1.0MHz		25		25		25	pF
C _{rss}	V _{GS} =12V, V _{DS} =0, f=1.0MHz		7.0		-		-	pF
C _{rss}	V _{GS} =7.0V, V _{DS} =0, f=1.0MHz		-		7.0		-	pF
C _{rss}	V _{GS} =5.0V, V _{DS} =0, f=1.0MHz		-		-		7.0	pF
t _{ON}	V _{DD} =10V, V _{GS} =12V, I _D =15mA, R _L =580Ω		16		-		-	ns
t _{ON}	V _{DD} =6.0V, V _{GS} =7.0V, I _D =7.0mA, R _L =743Ω		-		30		-	ns
t _{ON}	V _{DD} =6.0V, V _{GS} =5.0V, I _D =3.0mA, R _L =1800Ω		-		-		42	ns
t _{OFF}	V _{DD} =10V, V _{GS} =12V, I _D =15mA, R _L =580Ω		21		-		-	ns
t _{OFF}	V _{DD} =6.0V, V _{GS} =7.0V, I _D =7.0mA, R _L =743Ω		-		38		-	ns
t _{OFF}	V _{DD} =6.0V, V _{GS} =5.0V, I _D =3.0mA, R _L =1800Ω		-		-		60	ns