

2N5432, 2N5433, 2N5494

N-Channel Silicon Junction Field-Effect Transistor

- Low $r_{DS(on)}$
- Excellent Switching
- Low Cutoff Current

Absolute maximum ratings at $T_A = 25^\circ\text{C}$

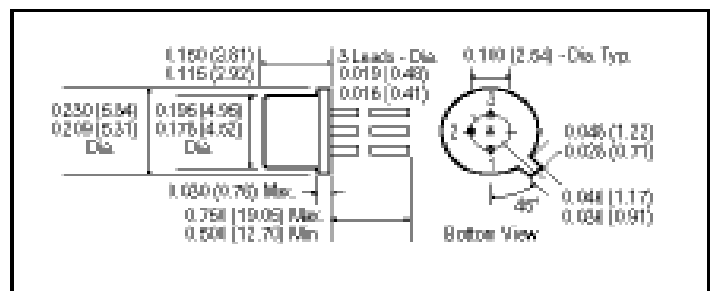
Reverse Gate Source & Gate Drain Voltage	-25V
Continuous Forward Gate Current	100 mA
Continuous Device Power Dissipation	300 mW
Power Derating	2.3 mW/ $^\circ\text{C}$
Storage Temperature Range	-65 $^\circ\text{C}$ to +150 $^\circ\text{C}$

At 25 $^\circ\text{C}$ free air temperature		2N5432		2N5433		2N5434		Process	
		NJ450		NJ450		NJ903			
Static Electrical Characteristics		Min	Max	Min	Max	Min	Max	Unit	Test Conditions
Gate Source Breakdown Voltage	$V_{(BR)GSS}$	-25		-25		-25		V	$I_G = -1 \mu\text{A}$, $V_{DS} = 0 \text{ V}$
Gate Reverse Current	I_{GSS}		-200		-200		-200	pA	$V_{GS} = -10 \text{ V}$, $V_{DS} = 0 \text{ V}$
Gate Source Cutoff Voltage	$V_{GS(OFF)}$	-4	-10	-3	-9	-1	-4	V	$V_{DS} = 10 \text{ V}$, $V_{GS} = 0 \text{ V}$
Drain Saturation Current (pulsed)	I_{DSS}	150		100		30		mA	$V_{DS} = 10 \text{ V}$, $V_{GS} = 0 \text{ V}$

Dynamic Electrical Characteristics

Parameter	Symbol	2N5432	2N5433	2N5434	Unit	Test Conditions	Frequency
Drain -Source On Resistance	$r_{ds(on)}$	5	7	10	Ω	$V_{GS} = 0 \text{ V}$, $I_D = 0 \text{ V}$	f = 1 kHz
Common-Source Input Capacitance	C_{iss}	30	30	30	pF	$V_{DS} = 0 \text{ V}$, $V_{GS} = -10 \text{ V}$	f = 1 MHz
Common-Source Reverse Transfer Capacitance	C_{rss}	15	15	15	pF	$V_{DS} = 0 \text{ V}$, $V_{GS} = -10 \text{ V}$	f = 1 MHz
Turn-On Delay Time	t_d	4	4	4	nS	$V_{DD} = -1.5 \text{ V}$, $V_{GS(on)} = 0 \text{ V}$, $V_{GS(off)} = -12 \text{ V}$, $I_{D(on)} = 10 \text{ mA}$	
Rise Time	t_r	1	1	1	nS		
Turn-Off Time	t_{off}	6	6	6	nS		
Fall Time	t_f	30	30	30	nS		

TO-52 Package
 Dimensions in inches (mm)
Pin Configuration
 1: Invt. 2: Drain 3: Gate & Case
Surface Mount
 SMP5432, SMP5433,
 SMP5434



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