

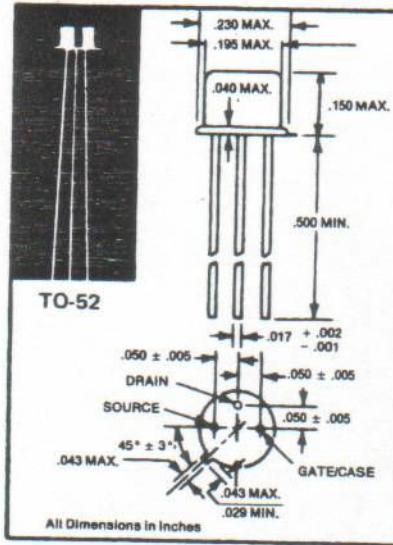


**ULTRA LOW RON
SWITCHING**
SILICON EPITAXIAL JUNCTION
N-CHANNEL FIELD EFFECT TRANSISTORS

2N5432
2N5433
2N5434

GEOMETRY 501

- LOW R_{DS} - 5 Ohms
- LOW C_{GD} - 15 pfd



ELECTRICAL DATA ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL		UNITS
Drain to Gate Voltage	BV_{DGO}	25	Volts
Gate to Source Voltage	BV_{GSO}	-25	Volts
Peak Forward Gate Current	I_{GF}	100	mA
Peak Drain Current	I_D	400	mA
Power Dissipation (free air)	P_D	400	mW
Derating Factor (free air)	DF	2.3	mW/°C
Junction Temp. (Oper. & Store)	T_J	-65°C to +200°C	
Lead Temp. (@ 1/16" ± 1/32" from case)	T_L	300°C for 10 sec.	

ELECTRICAL CHARACTERISTICS: $T_A = 25^\circ\text{C}$ (UNLESS OTHERWISE STATED)

PARAMETERS AND CONDITIONS	SYMBOL	2N5432			2N5433			2N5434			UNITS
		Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	
Gate Leakage Current $V_{GS} = -15V$ $V_{DS} = 0$	I_{GSS}	-	-	0.2	-	-	0.2	-	-	0.2	nA
Gate Leakage Current $V_{GS} = -15V$ $V_{DS} = 0$ $T_A = 150^\circ\text{C}$	I_{GSS}	-	-	0.2	-	-	0.2	-	-	0.2	μA
Drain Cutoff Current $V_{GS} = -10V$ $V_{DS} = 5V$	I_{DOFF}	-	-	0.2	-	-	0.2	-	-	0.2	nA
Drain Cutoff Current $V_{GS} = -10V$ $V_{DS} = 5V$ $T_A = 100^\circ\text{C}$	I_{DOFF}	-	-	0.2	-	-	0.2	-	-	0.2	μA
Pinch Off Voltage $V_{DS} = 5V$ $I_{DS} = 3\text{nA}$	V_{PO}	4.0	7.0	10	3.0	5.0	9.0	1.0	2.5	4.0	Volts
On Resistance $V_{GS} = 0$ $I_D = 10\text{mA}$	R_{DS}	2.0	4.0	5.0	-	-	7.0	-	-	10	Ohms
Drain-Source "On" Voltage $I_D = 10\text{mA}$ $V_{GS} = 0$	$V_{DS}(On)$	-	-	50	-	-	70	-	-	100	mV
Drain Current* $V_{DS} = 15V$ $V_{GS} = 0$	I_{DSS}	150	-	-	100	-	-	30	-	-	mA
Input Capacitance $V_{GS} = -10V$ $V_{DS} = 0$	C_{iss}	-	-	30	-	-	30	-	-	30	pfd
Reverse Transfer Capacitance $V_{GD} = -10V$	C_{rss}	-	-	15	-	-	15	-	-	15	pfd
Turn On Time ¹	$T_d + T_r$	-	-	5	-	-	5	-	-	5	nS
Turn Off Time ¹	$T_s + T_f$	-	-	36	-	-	36	-	-	36	nS

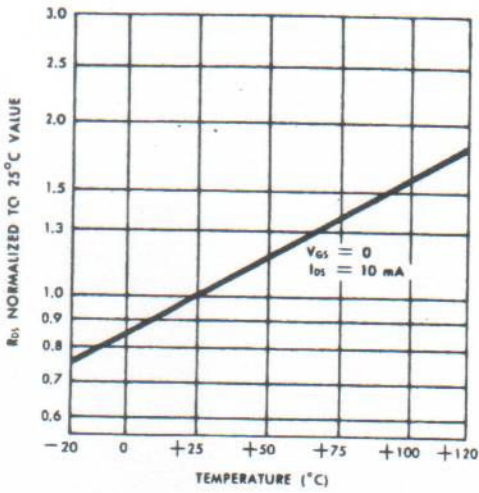
* Pulse Measurement. Pulsewidth 300 μs Duty Cycle \leq 3%.
¹ $R_G = 50 \Omega$, $V_{DD} = 1.5V$, $V_{\text{pulse}} = -12V$, $I_{D(ON)} = 10 \text{mA}$

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2N5432 Thru 2N5434
CM800

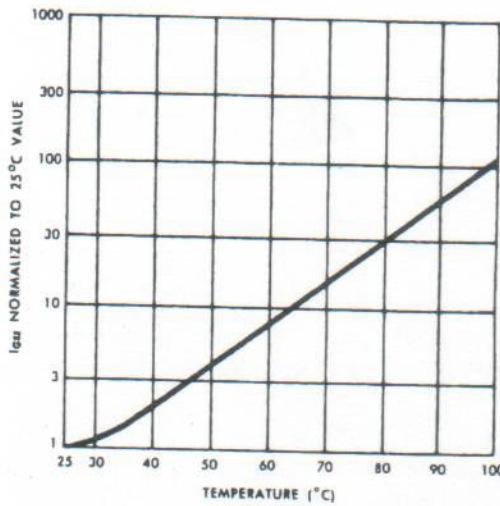
TYPICAL CHARACTERISTICS

ON RESISTANCE VS. TEMPERATURE



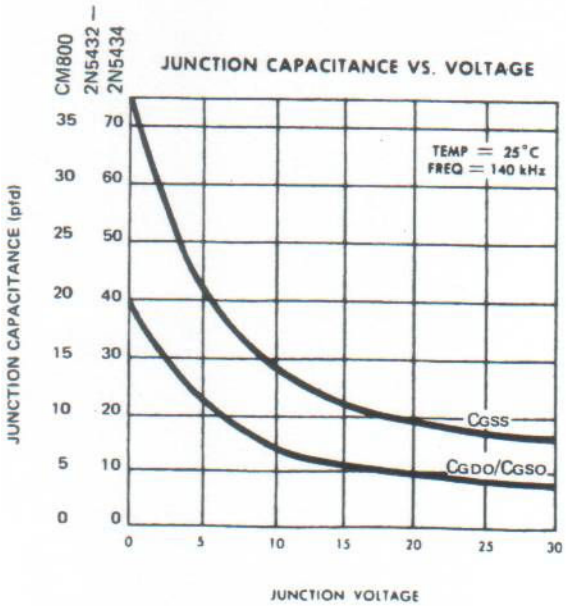
R_{ON} INCREASES $\approx 0.7\%/^{\circ}\text{C}$

GATE LEAKAGE CURRENT VS. TEMPERATURE

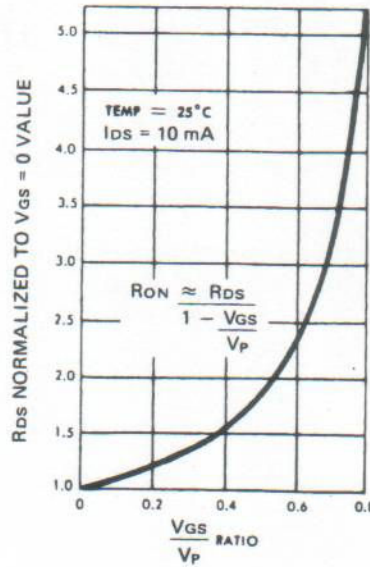


I_{gs} DOUBLES EACH 10°C

JUNCTION CAPACITANCE VS. VOLTAGE



ON RESISTANCE VS. GATE VOLTAGE



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