

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

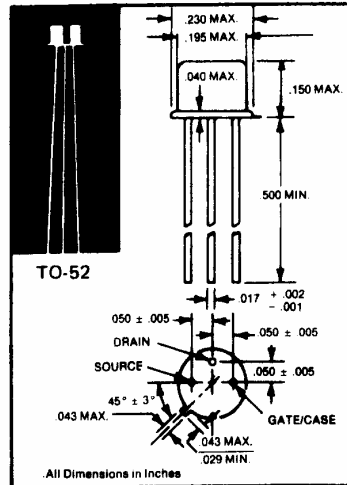
2N6568

GEOMETRY 504

- LOW R_{DS} - 2½ Ohms MAXIMUM
- HIGH I_{DSS} - 500 mA MINIMUM

ELECTRICAL DATA ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	2N6568	UNITS
Drain to Gate Voltage	BV_{DGO}	30	Volts
Gate to Source Voltage	BV_{GSO}	-30	Volts
Peak Forward Gate Current	I_{GF}	100	mA
Peak Drain Current	I_D	1.0	A
Power Dissipation (free air)	P_D	400	mW
Derating Factor (free air)	D_F	2.3	$mW/^\circ C$
Junction Temp. (Oper. & Store)	T_J	-65°C to +200°C	
Lead Temp. (@1/16" to 1/32" from case)	T_L	240°C for 10 sec.	



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

PARAMETERS and CONDITIONS	SYMBOL	CONDITION	2N6568			UNITS
			Min.	Typ.	Max.	
Gate Leakage Current	I_{GSS}	$V_{GS} = -15V, V_{DS} = 0$	-	-	1.0	nA
Gate Leakage Current	I_{GSS}	$V_{GS} = -15V, V_{DS} = 0, T_A = 100^\circ C$	-	-	1.0	μA
Drain Cutoff Current	$I_{D OFF}$	$V_{GS} = -10V, V_{DS} = 15V$	-	-	3.0	nA
Drain Cutoff Current	$I_{D OFF}$	$V_{GS} = -10V, V_{DS} = 15V, T_A = 100^\circ C$	-	-	1.0	μA
Pinch-Off Voltage	V_{PO}	$V_{DS} = 15V, I_{DS} = 3nA$	-	8	10	Volts
On Resistance	R_{DS}	$I_D = 10mA, V_{GS} = 0$	1.5	-	2.5	Ohms
Drain Source "On" Voltage	$V_{DS (On)}$	$I_D = 10mA, V_{GS} = 0$	-	-	25	mV
Drain Current*	I_{DSS}	$V_{DS} = 2V, V_{GS} = 0$	500	-	-	mA
Gate to Source Cap.	C_{GS}	$V_{GS} = -20V$	-	45	60	pf
Gate to Drain Cap.	C_{GD}	$V_{GD} = -20V$	-	45	60	pf
Turn On Time ¹	$T_d + T_r$		-	50	-	nS
Turn Off Time ¹	$T_s + T_f$		-	75	-	nS

* Pulse Measurement 1% Duty Cycle 10 MS Max.

¹ $R_G = 50 \Omega, V_{DD} = 1.5V, R_D = 150 \Omega, V, \text{ pulse} = -15V, \text{ Pulse width } 0.5 \mu s, V_{GS} = 0V$

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