

**HIGH VOLTAGE
SILICON EPITAXIAL JUNCTION
N-CHANNEL FIELD EFFECT TRANSISTORS**

**2N5543
2N5544**

GEOMETRY 559

FEATURES

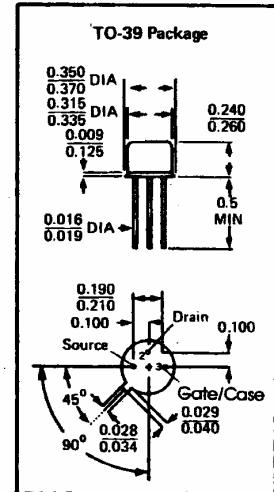
- HIGH $BV_{DGO} > 300V$ (2N5543)
- LOW CAPACITANCE

APPLICATIONS

- HIGH VOLTAGE CURRENT SOURCE
- HIGH VOLTAGE SWITCH

ELECTRICAL CHARACTERISTICS ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	2N5543	2N5544	UNITS
Drain to Gate Voltage	BV_{DGO}	300	200	Volts
Gate to Source Voltage	BV_{GSR}	-75	-50	Volts
Power Dissipation (25°C case)	PDC	5		W
Derating Factor (Junction to Case)	DFC	3.33		mW/°C
Power Dissipation (free air)	PDA	800		mW
Derating Factor (free air)	DFA	5.33		mW/°C
Junction Temp. (Oper. & Store)	T_J	-65 to 200		°C
Lead Temp. (1/16" From Case 10 sec)	T_L	300		°C
Continuous Forward Gate Current	I_{GF}	10		mA



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

SYMBOL	CONDITIONS	2N5543		2N5544		UNITS
		Min.	Max.	Min.	Max.	
BV_{DGO}	$I_G = 1\mu A$	300		200		V
I_{GSS}	$V_{GS} = -40V, V_{DS} = 0$ $V_{GS} = -40V, T_A = 150^\circ C$		-2.0 -4.0		-2.0 -4.0	nA μA
I_{GSS}	$V_{GS} = -75V, V_{DS} = 0$ $V_{GS} = -50V, V_{DS} = 0$		-1.0		-1.0	μA μA
$V_{GS(OFF)}$	$V_{DS} = 30V, I_D = 4nA$	-2	-15	-2	-15	V
I_{DSS}	$V_{DS} = 30V, V_{GS} = 0(1)$	2	10	2	10	mA
Y_{fs}	$V_{DS} = 30V, V_{GS} = 0, f = 1\text{ kHz (1)}$	750	3000	750	3000	$\mu mhos$
Y_{os}	$V_{DS} = 30V, V_{GS} = 0, f = 1\text{ kHz (1)}$		100		100	$\mu mhos$
$r_{ds(ON)}$	$V_{GS} = 0, I_D = 0, f = 1\text{ kHz}$		2000		2000	Ohms
C_{iss}	$V_{DS} = 30V, V_{GS} = 0, f = 1\text{ MHz}$		10		10	pf
C_{rss}	$V_{DS} = 30V, V_{GS} = 0, f = 1\text{ MHz}$		2		2	pf
Y_{fs}	$V_{DS} = 30V, V_{GS} = 0, f = 10\text{ MHz}$	500		500		$\mu mhos$

NOTE: Pulsed at $t_p = 100\text{ ms}$,
duty cycle = < 10%

CRYSTALONCS
2805 Veterans Highway
Suite 14
Ronkonkoma, N.Y. 11779