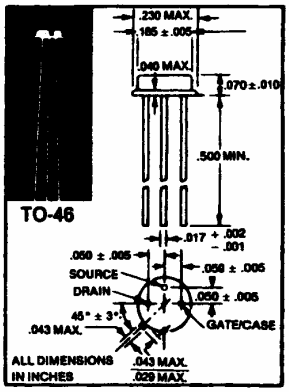
VERY LOW R_{ON} SWITCHING
SILICON EPITAXIAL JUNCTION N-CHANNEL FIELD EFFECT TRANSISTOR

CM 697

GEOMETRY 448-1

- LOW R_{DS} – 15 Ohms MAXIMUM
- LOW V_P – 3 Volts MAXIMUM
- HIGH I_{DSS} – 30 mA MINIMUM



TO-46

ELECTRICAL DATA ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	CM697	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)	D_F	2.3	mW/°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°C (UNLESS OTHERWISE STATED)

PARAMETERS and CONDITIONS	SYMBOL	CONDITION	CM697			UNITS
			Min.	Typ.	Max.	
Gate Leakage Current	I_{GSS}	V_{GS} = -15V, V_{DS} = 0	–	–	3.0	nA
Gate Leakage Current	I_{GSS}	V_{GS} = -15V, V_{DS} = 0, T_A = 100°C	–	–	0.6	μA
Drain Cutoff Current	$I_{D\,OFF}$	V_{GS} = -10V, V_{DS} = 5V	–	–	3.0	nA
Drain Cutoff Current	$I_{D\,OFF}$	V_{GS} = -10V, V_{DS} = 5V, T_A = 100°C	–	–	0.6	μA
Pinch-Off Voltage	V_{PO}	V_{DS} = 5V, I_{DS} = 3nA	0.5	1.5	3.0	Volts
On Resistance	R_{DS}	V_{DS} = 0.1V, V_{GS} = 0	5	–	15	Ohms
Drain Source "On" Voltage	V_{DS} (On)	I_D = 3.3mA, V_{GS} = 0	–	–	50	mV
Drain Current*	I_{DSS}	V_{DS} = 2V, V_{GS} = 0	30	–	–	mA
Gate to Source Cap.	C_{GS}	V_{GS} = -20V	–	16	20	pfd
Gate to Drain Cap.	C_{GD}	V_{GD} = -20V	–	16	20	pfd
Turn On Time[1]	Td + Tr		–	35	–	ns
Turn Off Time[1]	Ts + Tf		–	35	–	ns

* Pulse Measurement 1% Duty Cycle 10MS Max.

[1] R_G = 50 Ω, V_{DD} = 1.5V, R_D = 150 Ω, V pulse = -10V, Pulse width 0.5 μs min., V_{GS} = 0V

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