Siliconix incorporated

TN2460 SERIES
N-Channel Enhancement-Mode MOS Transistors

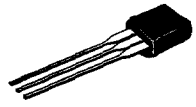
PRODUCT SUMMARY

PART NUMBER	$V_{(BR)DSS}$ (V)	$r_{DS(ON)}$ (Ω)	I_D (mA)	PACKAGE
TN2460L	240	60	76	TO-92
TN2460T	240	60	51	SOT-23

Performance Curves: VNDN24

PRODUCT MARKING	
TN2460T	TO3

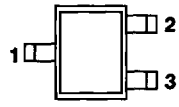
TO-92 (TO-226AA)

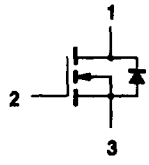


BOTTOM VIEW

SOT-23

BOTTOM VIEW





1 DRAIN
2 GATE
3 SOURCE

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C Unless Otherwise Noted)

PARAMETERS/TEST CONDITIONS		SYMBOL	LIMITS TN2460L	LIMITS TN2460T	UNITS
Drain-Source Voltage		V_{DS}	240	240	V
Gate-Source Voltage		V_{GS}	±20	±20	
Continuous Drain Current[1]	T_A = 25°C	I_D	±76	±51	mA
	T_A = 100°C		±48	±32	
Pulsed Drain Current[1]		I_{DM}	±0.8	±0.40	
Power Dissipation	T_A = 25°C	P_D	0.80	0.36	W
	T_A = 100°C		0.32	0.14	
Operating Junction Temperature		T_J	-55 to 150		°C
Storage Temperature		T_{stg}	-55 to 150		
Lead Temperature ($^1/_{16}$" from case for 10 sec.)		T_L	300		

THERMAL RESISTANCE RATINGS

THERMAL RESISTANCE	SYMBOL	LIMITS TN2460L	LIMITS TN2460T	UNITS
Junction-to-Ambient	R_{thJA}	156	350	K/W

[1]Pulse width limited by maximum junction temperature

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SPECIFICATIONS[a]			LIMITS			
PARAMETER	SYMBOL	TEST CONDITIONS	TYP[b]	MIN	MAX	UNIT
STATIC						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	I_D = 10 µA, V_{GS} = 0 V	260	240		V
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS} = V_{GS}, I_D = 250 µA	1.40	0.5	1.8	
Gate-Body Leakage	I_{GSS}	V_{DS} = 0 V, V_{GS} = ±20 V			±10	nA
		T_J = 125°C	±5			
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS} = 120 V, V_{GS} = 0 V			0.1	µA
		T_J = 125°C			5.0	
On-State Drain Current[c]	$I_{D(ON)}$	V_{DS} = 10 V, V_{GS} = 4.5 V	140	20		mA
		V_{DS} = 10 V, V_{GS} = 10 V	170	75		
Drain-Source On-Resistance[c]	$r_{DS(ON)}$	V_{GS} = 4.5 V, I_D = 20 mA	55		60	Ω
		T_J = 125°C	110		120	
		V_{GS} = 10 V, I_D = 50 mA			60	
Forward Transconductance[c]	g_{FS}	V_{DS} = 10 V, I_D = 50 mA		30		mS
DYNAMIC						
Input Capacitance	C_{iss}	V_{GS} = 0 V, V_{DS} = 25 V, f = 1 MHz	15		30	pF
Output Capacitance	C_{oss}		4		15	
Reverse Transfer Capacitance	C_{rss}		1		10	
SWITCHING						
Turn-On Time	t_{ON}	V_{DD} = 25 V, R_L = 500 Ω, I_D = 50 mA V_{GEN} = 10 V, R_G = 25 Ω	10		20	ns
Turn-Off Time	t_{OFF}	(Switching time is essentially independent of operating temperature)	20		35	

NOTES:
a. T_A = 25°C unless otherwise noted.
b. For design aid only, not subject to production testing.
c. Pulse test: Pulse Width ≤ 80 µsec, Duty Cycle ≤ 1%.