

NTE238

Silicon NPN Transistor

Color TV, Horizontal Output

Description:

The NTE238 is a silicon NPN horizontal deflection transistor in a TO3 type package designed for use in deflection circuits.

Features:

- $V_{CEX} = 1500V$
- Safe Operating Area @ $50\mu s = 20A, 400V$

Absolute Maximum Ratings:

Collector-Emitter Voltage, V_{CEX}	1500V
Emitter-Base Voltage, V_{EB}	5V
Collector Current-Continuous, I_C	8A
Base Current-Continuous, I_B	4A
Emitter Current-Continuous, I_E	12A
Total Power Dissipation ($T_C = +25^\circ C$), P_D	100W
Derate above $25^\circ C$	0.8W/ $^\circ C$
Operating Junction Temperature Range, T_J	-65° to $+150^\circ C$
Storage Temperature Range, T_{stg}	-65° to $+150^\circ C$
Thermal Resistance, Junction-to-Case, R_{thJC}	1.25 $^\circ C/W$
Maximum Lead Temperature (Soldering Purposes, 1/8" from case for 5sec), T_L	$+275^\circ C$

Electrical Characteristics: ($T_C = +25^\circ C$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
OFF Characteristics						
Collector-Emitter Sustaining Voltage	$V_{CEO(sus)}$	$V_C = 50mA, I_B = 0$	750	—	—	V
Collector Cutoff Current	I_{CES}	$V_{CE} = 1500V, V_{BE} = 0$	—	—	0.25	mA
Emitter Cutoff Current	I_{EBO}	$V_{BE} = 5V, I_C = 0$	—	—	0.1	mA
ON Characteristics (Note 1)						
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 5A, I_B = 1A$	—	—	5.0	V
Base Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 5A, I_B = 1A$	—	—	1.5	V
SWITCHING CHARACTERISTICS						
Fall Time	t_f	$I_C = 5A, I_{B1} = 1A, L_B = 8\mu H$	—	0.4	1.0	μs

Note 1. Pulse test: Pulse Width $\leq 300\mu s$, Duty Cycle = 2%.

