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NTE2506 Silicon NPN Transistor High Frequency Video Driver

Description:

The NTE2506 is a silicon NPN epitaxial transistor in a TO126 type package designed for use in the cascode stage of the driver for high-resolution color graphics monitors.

Features:

- High Breakdown Voltage
- Low Output Capacitance

Absolute Maximum Ratings:

Collector–Base Voltage, V_{CBO}	115V
Collector–Emitter Voltage, V_{CEO}	95V
Collector–Emitter Voltage ($R_{BE} = 100\Omega$), V_{CER}	110V
Emitter–Base Voltage, V_{EBO}	3V
DC Collector Current, I_C	400mA
Total Power Dissipation ($T_S \leq +85^\circ\text{C}$, Note 1), P_{tot}	5W
Operating Junction Temperature, T_J	+175°C
Storage Temperature Range, T_{stg}	–65° to +150°C
Thermal Resistance, Junction–to–Soldering Point ($T_S \leq +85^\circ\text{C}$, Note 1), R_{thJS}	18K/W

Note 1. T_S is the temperature at the soldering point of the collector lead.

Electrical Characteristics: ($T_J = +25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector–Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 0.1\text{mA}$	115	–	–	V
Collector–Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 10\text{mA}$	95	–	–	V
	$V_{(BR)CER}$	$I_C = 10\text{mA}, R_{BE} = 100\Omega$	110	–	–	V
Emitter–Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 0.1\text{mA}$	3	–	–	V
Collector Cutoff Current	I_{CES}	$I_B = 0, V_{CE} = 50\text{V}$	–	–	100	μA
	I_{CBO}	$I_E = 0, V_{CB} = 50\text{V}$	–	–	20	μA
DC Current Gain	h_{FE}	$I_C = 100\text{mA}, V_{CE} = 10\text{V}, T_A = +25^\circ\text{C}$	20	35	–	
Transition Frequency	f_T	$I_C = 100\text{mA}, V_{CE} = 10\text{V}, f = 100\text{MHz}, T_A = +25^\circ\text{C}$	0.8	1.2	–	GHz
Collector–Base Capacitance	C_{cb}	$I_C = 0, V_{CB} = 10\text{V}, f = 1\text{MHz}, T_A = +25^\circ\text{C}$	–	2.0	–	pF
Collector Capacitance	C_C	$I_E = I_e = 0, V_{CB} = 10\text{V}, f = 1\text{MHz}$	–	3.5	–	pF

