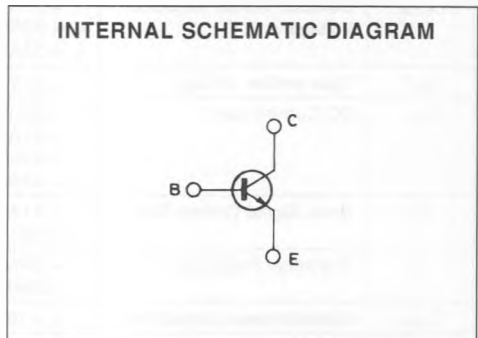
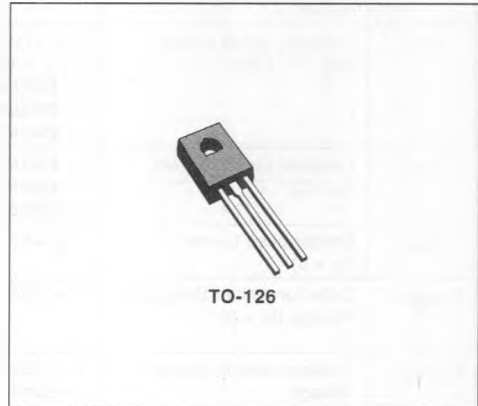


HIGH VOLTAGE POWER TRANSISTORS

DESCRIPTION

The 2N5655, 2N5656 and 2N5657 are silicon epitaxial planar NPN transistors in Jedec TO-126 plastic package. They are intended for use audio output amplifiers, low current, high voltage converters and AC line relays.



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	2N5655	2N5656	2N5657	Unit
V_{CBO}	Collector-base Voltage ($I_E = 0$)	275	325	375	V
V_{CEO}	Collector-emitter Voltage ($I_B = 0$)	250	300	350	V
V_{EBO}	Emitter-base Voltage ($I_C = 0$)	6			V
I_C	Collector Current	0.5			A
I_{CM}	Collector Peak Current	1			A
I_B	Base Current	0.25			A
P_{tot}	Total Power Dissipation at $T_{case} \leq 25^\circ C$	20			W
T_{stg}	Storage Temperature	- 65 to 150			$^\circ C$
T_j	Junction Temperature	150			$^\circ C$

THERMAL DATA

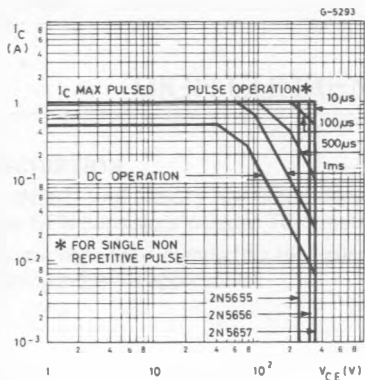
$R_{th(j-case)}$	Thermal Resistance Junction-case	Max	6.25	$^{\circ}C/W$
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ELECTRICAL CHARACTERISTICS ($T_{case} = 25^{\circ}C$ unless otherwise specified)

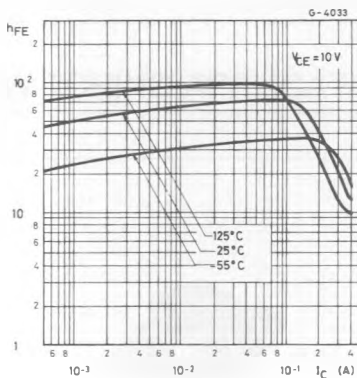
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CBO}	Collector Cutoff Current ($I_E = 0$)	$V_{CB} = \text{rated } V_{CBO}$			10	μA
I_{CEV}	Collector Cutoff Current ($V_{BE} = -1.5V$)	$V_{CE} = \text{rated } V_{CEO}$ $T_{case} = 100^{\circ}C$ for 2N5655 $V_{CE} = 150V$ for 2N5656 $V_{CE} = 200V$ for 2N5657 $V_{CE} = 250V$			0.1 1 1 1	mA mA mA mA
I_{CEO}	Collector Cutoff Current ($I_B = 0$)	for 2N5655 $V_{CE} = 150V$ for 2N5656 $V_{CE} = 200V$ for 2N5657 $V_{CE} = 250V$			0.1 0.1 0.1	mA mA mA
I_{EBO}	Emitter-base Current ($I_C = 0$)	$V_{EB} = 6V$			10	μA
$V_{(BR)CEO}^*$	Collector-emitter Breakdown Voltage ($I_B = 0$)	$I_C = 1mA$ for 2N5655 for 2N5656 for 2N5657	250 300 350			V V V
$V_{CEO(sus)}^*$	Collector-emitter Sustaining Voltage	$I_C = 100mA$ for 2N5655 $L = 50mH$ for 2N5656 for 2N5657	250 300 350			V V V
$V_{CE(sat)}^*$	Collector-emitter Saturation Voltage	$I_C = 0.1A$ $I_B = 10mA$ $I_C = 0.25A$ $I_B = 25mA$ $I_C = 0.5A$ $I_B = 0.1A$			1 2.5 10	V V V
V_{BE}^*	Base-emitter Voltage	$I_C = 0.1V$ $V_{CE} = 10V$			1	V
h_{FE}^*	DC Current Gain	$I_C = 50mA$ $V_{CE} = 10V$ $I_C = 0.1A$ $V_{CE} = 10V$ $I_C = 0.25A$ $V_{CE} = 10V$ $I_C = 0.5A$ $V_{CE} = 10V$	25 30 15 5		250	
h_{fe}	Small Signal Current Gain	$I_C = 0.1A$ $V_{CE} = 10V$ $f = 1KHz$	20			
f_T	Transition Frequency	$I_C = 50mA$ $V_{CE} = 10V$ $f = 10MHz$	10			MHz
C_{CBO}	Collector-base Capacitance	$V_{CB} = 10V$ $f = 100KHz$			25	pF

* Pulsed : pulse duration = 300 μs , duty cycle $\leq 1.5\%$.

Safe Operating Areas.



DC Current Gain.



Collector-emitter Saturation Voltage.

