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2N404A

GERMANIUM TRANSISTOR

JEDEC TO - 5 CASE

MAXIMUM RATINGS ($T_A = 25^{\circ}C$)

Collector-Base Voltage	V_{CBO}	40 volts
Collector-Emitter Voltage (Punch - through)	V_{pt}	35 volts
Emitter-Base Voltage	V_{EBO}	25 volts
Collector Current	I_c	150 m Amps
Emitter Current	I_E	150 m Amps
Power Dissipation	P_T	150 m Watts
Operating Junction Temperature	T_j	-65 to 100° C
Storage Temperature	T_{stg}	-65 to 100° C

ELECTRICAL CHARACTERISTICS ($T_A = 25^{\circ}C$ unless otherwise noted)

Symbol	Test Conditions	Min.	Max.	Unit
I_{CBO}	$V_{CB} = 12$ V		5	uA
I_{CBO}	$V_{CB} = 12$V, $T_A = 80^{\circ}$ C		90	uA
I_{EBO}	$V_{EB} = 2.5$V		2.5	uA
V_{CBO}	$I_c = 20$ uA	40		V
V_{EBO}	$I_E = 20$ uA	25		V
V_{CE} (s)	$I_c = 12$ mA, $I_B = 0.4$ mA		0.15	V
V_{CE} (s)	$I_c = 24$ mA, $I_B = 1.0$ mA		0.20	V
V_{BE} (s)	$I_c = 12$ mA, $I_B = 0.4$ mA		0.35	V
V_{BE} (s)	$I_c = 24$ mA, $I_B = 1.0$ mA		0.40	v
h_{FE}	$V_{CE} = 0.15$V, $I_c = 12$ mA	30		-
h_{FE}	$V_{CE} = 0.20$V, $I_c = 24$ mA	24		-
$V_{EBf.L}$	$V_{CB} = 35$V		1.0	V
h_{fe}	$V_{CE} = 6$V, $I_c = 1$ mA, f = 1 Khz	135 typ.		-
h_{ie}	$V_{CE} = 6$V, $I_c = 1$ mA, f = 1 Khz	4 typ.		Kohm
h_{oe}	$V_{CE} = 6$V, $I_c = 1$ mA, f = 1 Khz	50 typ.		umhD
h_{re}	$V_{CE} = 6$V, $I_c = 1$ mA, f = 1 Khz	$7X10^{-4}$typ.		-
c_{ob}	$V_{CB} = 6$V, f = 2 mHZ		20	pf
f_{hfb}	$V_{CB} = 6$V, $I_E = 1$ mA	4		mHZ