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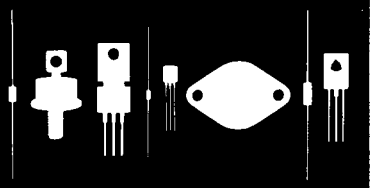

2N2152 THRU 2N2154
2N2156 THRU 2N2158

GERMANIUM PNP POWER TRANSISTOR
170 WATTS

JEDEC TO-36 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N2152, 2N2156 Series types are Germanium Alloy PNP Power Transistors designed for high power, high gain industrial applications.

MAXIMUM RATINGS (T_C=25°C)

	SYMBOL	2N2152 2N2156	2N2153 2N2157	2N2154 2N2158	UNIT
Collector-Base Voltage	V_{CBO}	45	60	75	V
Collector-Emitter Voltage	V_{CES}	45	60	75	V
Collector-Emitter Voltage	V_{CEO}	30	45	60	V
Emitter-Base Voltage	V_{EBO}	25	30	40	V
Collector Current	I_C	30	30	30	A
Power Dissipation	P_D	170	170	170	W
Operating and Storage Junction Temperature	T_J, T_{stg}		-65 TO +110		°C
Thermal Resistance, Junction To Case	Θ_{JC}	0.5	0.5	0.5	°C/W

ELECTRICAL CHARACTERISTICS (T_C=25°C unless otherwise noted)

		2N2152 2N2156		2N2153 2N2157		2N2154 2N2158		
SYMBOL	TEST CONDITIONS	MIN	MAX	MIN	MAX	MIN	MAX	UNIT
I_{CBO}	V_{CB}=2.0V		0.2		0.2		0.2	mA
I_{CBO}	V_{CB}=Rated V_{CBO}		4.0		4.0		4.0	mA
I_{CBO}	V_{CB}=Rated V_{CBO}, T_C=71°C		15		15		15	mA
I_{EBO}	V_{EB}=Rated V_{EBO}		4.0		4.0		4.0	mA
I_{EBO}	V_{EB}=Rated V_{EBO}, T_C=71°C		15		15		15	mA
BV_{CES}	I_C=300mA	45		60		75		V
BV_{CEO}	I_C=1.0A	30		45		60		V
V_{EBF}	V_{CB}=Rated V_{CBO}		1.0		1.0		1.0	V
$V_{CE(SAT)}$	I_C=5.0A, I_B=500mA		0.1		0.1		0.1	V
$V_{CE(SAT)}$	I_C=25A, I_B=2.0A		0.3		0.3		0.3	V
$V_{BE(SAT)}$	I_C=5.0A, I_B=500mA		1.0		1.0		1.0	V
$V_{BE(SAT)}$	I_C=25A, I_B=2.0A		2.0		2.0		2.0	V
h_{FE}	V_{CE}=2.0V, I_C=5.0A (2N2152, 2N2153, 2N2154 ONLY)	50	100	50	100	50	100	
h_{FE}	V_{CE}=2.0V, I_C=5.0A (2N2156, 2N2157, 2N2158 ONLY)	80	160	80	160	80	160	
h_{FE}	V_{CE}=2.0V, I_C=15A (2N2152, 2N2153, 2N2154 ONLY)	25	-	25	-	25	-	
h_{FE}	V_{CE}=2.0V, I_C=15A (2N2156, 2N2157, 2N2158 ONLY)	40	-	40	-	40	-	
h_{FE}	V_{CE}=2.0V, I_C=25A (ALL TYPES)	15	-	15	-	15	-	
$f_{\alpha e}$	V_{CE}=6.0V, I_C=5.0A	2.0	-	2.0	-	2.0	-	kHz