

2N696 (SILICON)

2N697



**ASE 31
(TO-5)**

NPN silicon annular transistors designed for small-signal amplifier and general purpose switching applications.

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V_{CER}	40	Vdc
Collector-Base Voltage	V_{CB}	60	Vdc
Emitter-Base Voltage	V_{EB}	5.0	Vdc
Total Device Dissipation @ $T_A = 25^\circ C$ Derate above $25^\circ C$	P_D	0.6 13.3	Watt mW/ $^\circ C$
Total Device Dissipation @ $T_C = 25^\circ C$ Derate above $25^\circ C$	P_D	2.0 13.3	Watts mW/ $^\circ C$
Operating and Storage Junction Temperature Range	T_J, T_{stg}	-65 to +200	$^\circ C$

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

Characteristic	Symbol	Min	Max	Unit
DC CHARACTERISTICS				
Collector-Emitter Breakdown Voltage* ($I_C = 100$ mAdc, $R_{BE} = 10$ ohms)	BV_{CER}^*	40		Vdc
Collector-Base Breakdown Voltage ($I_C = 100$ μ Adc, $I_E = 0$)	BV_{CBO}	60		Vdc
Emitter-Base Breakdown Voltage ($I_E = 100$ μ Adc, $I_C = 0$)	BV_{EBO}	5.0		Vdc
Collector Cutoff Current ($V_{CB} = 30$ Vdc, $I_E = 0$) ($V_{CB} = 30$ Vdc, $I_E = 0$, $T_A = 150^\circ C$)	I_{CBO}	-	1.0 100	μ Adc

AC CHARACTERISTICS

DC Current Gain* ($I_C = 150$ mAdc, $V_{CE} = 10$ Vdc)	h_{FE}^*	20 40	60 120	-
Collector-Emitter Saturation Voltage* ($I_C = 150$ mAdc, $I_B = 15$ mAdc)	$V_{CE(sat)}^*$	-	1.5	Vdc
Base-Emitter Saturation Voltage* ($I_C = 150$ mAdc, $I_B = 15$ mAdc)	$V_{BE(sat)}^*$	-	1.3	Vdc

YNAMIC CHARACTERISTICS

Current Gain-Bandwidth Product ($I_C = 50$ mAdc, $V_{CE} = 10$ Vdc, $f = 20$ MHz)	f_T	40 50	-	MHz
Output Capacitance ($V_{CB} = 10$ Vdc, $I_E = 0$)	C_{ob}	-	35	pF

