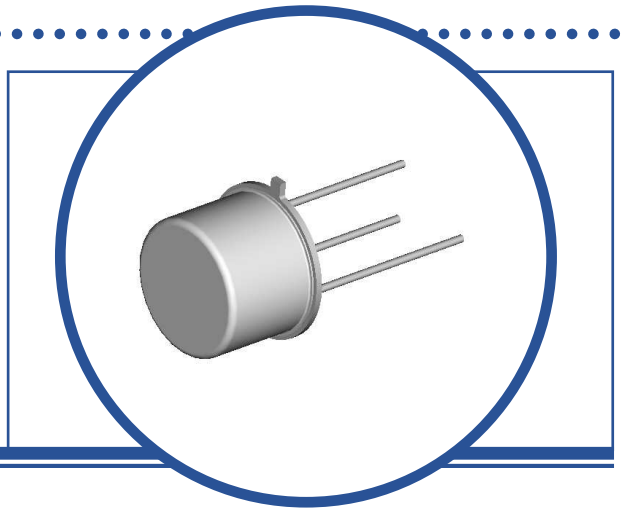
GENERAL PURPOSE SILICON NPN TRANSISTOR

TT electronics
Semelab Limited

2N697

- Hermetic TO39 (TO-205AD) Metal Package.
- Ideally suited for General Purpose Applications
- Screening Options Available



ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise stated)

V_{CBO}	Collector – Base Voltage		60V
V_{CER}	Collector – Emitter Voltage		40V
V_{EBO}	Emitter – Base Voltage		5.0V
P_D	Total Power Dissipation at	T_A = 25°C	600mW
		Derate Above 25°C	4.0mW/°C
P_D	Total Power Dissipation at	T_C = 25°C	2.0W
		Derate Above 25°C	13.3mW/°C
T_J	Junction Temperature Range		-65 to +200°C
T_{stg}	Storage Temperature Range		-65 to +200°C

THERMAL PROPERTIES

Symbols	Parameters	Max.	Units
$R_{\theta JA}$	Thermal Resistance, Junction To Ambient	290	°C/W
$R_{\theta JC}$	Thermal Resistance, Junction To Case	88	°C/W

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SILICON PLANAR EPITAXIAL NPN TRANSISTOR 2N697

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise stated)

Symbols	Parameters	Test Conditions		Min.	Typ.	Max.	Units
$V_{(BR)CER}$ (1)	Collector-Emitter Breakdown Voltage	I_C = 10mA	R_{BE} = 10Ω	40			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	I_C = 100µA	I_E = 0	60			
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	I_E = 100µA	I_C = 0	5.0			
I_{CBO}	Collector Cut-Off Current	V_{CB} = 30V	I_E = 0			1.0	µA
			T_A = 150°C			100	
$V_{CE(sat)}$ (1)	Collector-Emitter Saturation Voltage	I_C = 150mA	I_B = 15mA			1.5	V
$V_{BE(sat)}$ (1)	Base-Emitter Saturation Voltage	I_C = 150mA	I_B = 15mA			1.3	
h_{FE} (1)	Forward-current transfer ratio	I_C = 150mA	V_{CE} = 10V	40		120	

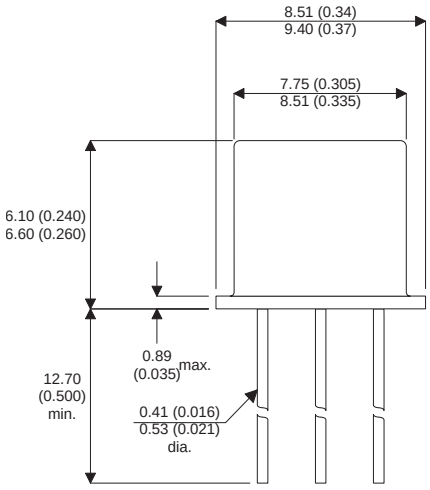
DYNAMIC CHARACTERISTICS

$\lvert h_{fe} \rvert$	Small signal forward-current transfer ratio	I_C = 50mA f = 20MHz	V_{CE} = 10V	2.5			
C_{obo}	Output Capacitance	V_{CB} = 10V f = 1.0MHz	I_E = 0			35	pF

Notes
(1) Pulse Width ≤ 300us, δ ≤ 2%

MECHANICAL DATA

Dimensions in mm (inches)



TO39 (TO-205AD)
Underside View

Pin 1	Pin 2	Pin 3
Emitter	Base	Collector