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Mesa transistor type 2N695 is a germanium P-N-P diffused junction transistor designed primarily for reliable operation in ultra high speed switching applications. Its unique structure provides the versatility required for dependable performance in a wide variety of computer pulse and switching circuits (both saturating and non-saturating). The internal design and hermetically sealed package enable it to meet or exceed the mechanical and environmental requirements of military specification MIL-T-19500A. The high maximum junction temperature of 100°C permits this Germanium transistor to be reliably operated in applications where Germanium transistors have not been previously considered.

TECHNICAL DATA

2N695

ULTRA HIGH - SPEED MESA SWITCHING TRANSISTOR

August 1, 1958

ABSOLUTE MAXIMUM RATINGS

Collector to Base Voltage	15 volts
Collector to Emitter Voltage	12 volts
Emitter to Base Voltage	3 volts
Collector D.C. Current	20 ma
Maximum Junction Temperature	100°C
Maximum Storage Temperature	100°C
Collector Dissipation in Free Air Derate 1.0 mw/°C above 50°C	50 mw

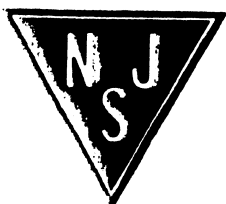
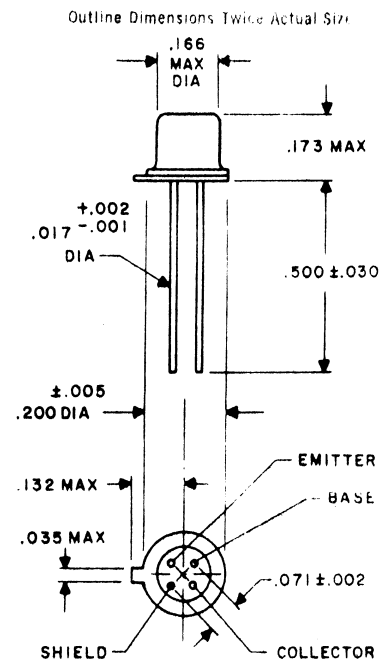
ELECTRICAL CHARACTERISTICS

@ 25°C, unless otherwise noted	typ.	max.	UNITS
Collector Cutoff Current, I_{CO} $V_{CB} = -6V, I_E = 0$	1	10	μA
Emitter Cutoff Current, I_{EO} $V_{EB} = -2V, I_C = 0$	10	—	μA
Collector to Emitter Voltage, V_{CE} $I_C = 10 \text{ ma}, I_E = 1 \text{ ma}$.25	—	volts
Emitter to Base Voltage, V_{EB} $I_C = 10 \text{ ma}, I_E = 1 \text{ ma}$.35	—	volts
Forward Transfer Current Ratio, h_{FE} $I_C = 10 \text{ ma}, V_{CE} = 0.5V$	30	—	
Output Capacitance, C_{ob} $V_C = -6V, I_E = 0$	4	—	μf

THERMAL CHARACTERISTICS

Thermal Resistance Junction to Case	1°C/mw
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- Extreme reliability — only high temperature materials used, process carefully controlled.
- Rugged — withstands 50,000G acceleration.
- Low nuclear radiation susceptibility.
- Meets or exceeds mechanical and environmental requirements of MIL-T-19500A.
- High uniformity — "normal" instead of "selected" distribution.
- New header design provides effective interelectrode capacitance isolation... smaller inductance.



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