

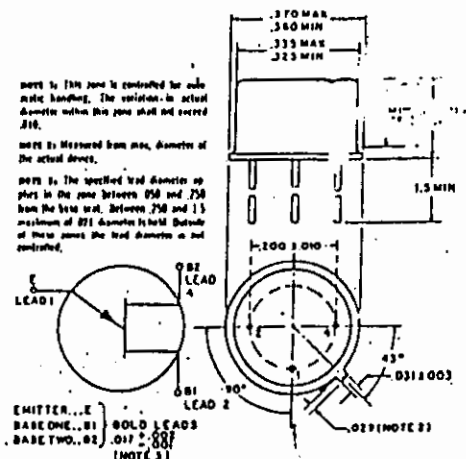
2N1671, 1A, B, C

The 2N1671 is intended for general purpose industrial applications where circuit economy is of primary importance. The 2N1671A is intended for industrial use in firing circuits for Silicon Controlled Rectifiers and other applications where a guaranteed minimum pulse amplitude is required. The 2N1671C is intended for applications where a low emitter leakage current and a low peak emitter current (trigger current) are required.

These transistors feature Fixed-Bed Construction and are hermetically sealed in a welded case. All leads are electrically isolated from the case.

absolute maximum ratings (25°C)

RMS Power Dissipation	450 mw ¹
RMS Emitter Current	50 ma
Peak Emitter Current ²	2 amperes
Emitter Reverse Voltage	30 volts
Interbase Voltage	35 volts
Operating Temperature Range	-65°C to +140°C
Storage Temperature Range	-65°C to +150°C



electrical characteristics (25°C)

PARAMETER	SYMBOL	2N1671		2N1671A		2N1671B		2N1671C	
		MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.
Intrinsic Standoff Ratio ($V_{BB} = 10V$) (Note 3)	η	0.47	0.62	0.47	0.62	0.47	0.62	0.47	0.62
Interbase Resistance ($V_{BB} = 3V$, $I_E = 0$) (Note 4)	R_{ABO}	4.7	9.1	4.7	9.1	4.7	9.1	4.7	9.1
Emitter Saturation Voltage ($V_{BB} = 10V$, $I_E = 50$ ma)	$V_E(SAT)$		5		5		5		5
Modulated Interbase Current ($V_{BB} = 10V$, $I_E = 50$ ma)	$I_{B1}(MOD)$	6.8	22	6.8	22	6.8	22	6.8	22
Emitter Reverse Current ($V_{BB} = 30V$, $I_{B1} = 0$) (Fig. 6)	I_{E0}		12		12		0.2		0.2
Peak Point Emitter Current ($V_{BB} = 25V$) (Fig. 8)	I_P		25		25		6		6
Valley Point Current ($V_{BB} = 20V$, $R_{B1} = 100\Omega$) (Fig. 9)	I_V	8		8		8		8	
Base-One Peak Pulse Voltage (Note 5)	V_{OB1}			3.0		3.0		3.0	
Emitter Reverse Current ($V_{BB} = 25V$, $V_{EB1} = V_P - .3V$) (Fig. 8)	I_{ER}								

NOTES:

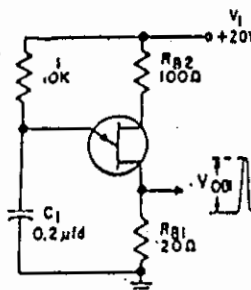
(1) Derate 3.9 MW/°C increase in ambient temperature (Thermal resistance to case = 0.16°C/MW.)

(2) Capacitor discharge—10μfd or less, 30 volts or less—Total interbase power dissipation must be limited by external circuitry.

(3) The intrinsic standoff ratio, η , is essentially constant with temperature and interbase voltage. η is defined by the equation:

(4) The interbase resistance is nearly ohmic and increases with temperature in a well defined manner as shown in figures 10 and 11. The temperature coefficient at 25°C is approximately 0.8%/°C.

(5) The base-one peak pulse voltage is measured in the circuit below. This specification on the 2N1671A is used to ensure a minimum pulse amplitude for applications in SCR firing circuits and other types of pulse circuits. The variation of pulse amplitude with temperature and circuit parameters is shown in figures 12 to 15.



Quality Semi-Conductors