



No.3036

2SC4491

NPN Epitaxial Planar Silicon Transistor

L Load (Various Drivers)  
Switching Applications

**Applications**

- Suitable for use in switching of L load (motor drivers, printer hammer drivers, relay drivers).

**Features**

- Darlington connection.
- On-chip zener diode of  $60 \pm 10V$  between collector and base.
- Uniformity in collector to base voltage.
- High DC current gain
- Wide ASO
- Large inductive load handling capability.

**Absolute Maximum Ratings at  $T_a = 25^\circ C$**

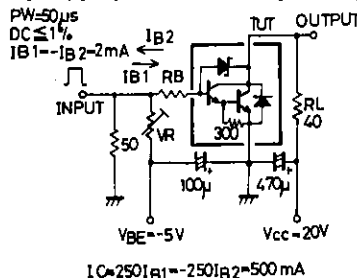
			unit
Collector to Base Voltage	$V_{CB0}$	※50	V
Collector to Emitter Voltage	$V_{CE0}$	※50	V
Emitter to Base Voltage	$V_{EB0}$	6	V
Collector Current	$I_C$	1.2	A
Collector Current(Pulse)	$I_{CP}$	2.5	A
Collector Dissipation	$P_C$	1	W
Junction Temperature	$T_j$	150	$^\circ C$
Storage Temperature	$T_{stg}$	-55 to +150	$^\circ C$

※ : On-chip zener diode ( $60 \pm 10V$ )

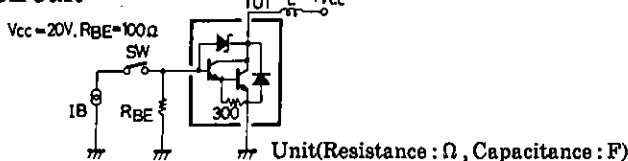
**Electrical Characteristics at  $T_a = 25^\circ C$**

			min	typ	max	unit
Collector Cutoff Current	$I_{CBO}$	$V_{CB} = 40V, I_E = 0$			10	$\mu A$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = 5V, I_C = 0$			10	$\mu A$
DC Current Gain	$h_{FE}$	$V_{CE} = 5V, I_C = 500mA$	1000	5000		
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = 500mA, I_B = 2mA$		1.0	1.5	V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = 500mA, I_B = 2mA$			2.0	V
Inductive Load	$Es/b$	$L = 100mH, R_{BE} = 100\Omega$	15			mJ
Handling Capability						
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 100\mu A, I_E = 0$	50	60	70	V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 1mA, R_{BE} = \infty$	50	60	70	V
Turn-on Time	$t_{on}$	See specified Test Circuit.		0.2		$\mu s$
Storage Time	$t_{stg}$	〃		2.2		$\mu s$
Fall Time	$t_f$	〃		0.4		$\mu s$

**Switching Time Test Circuit**

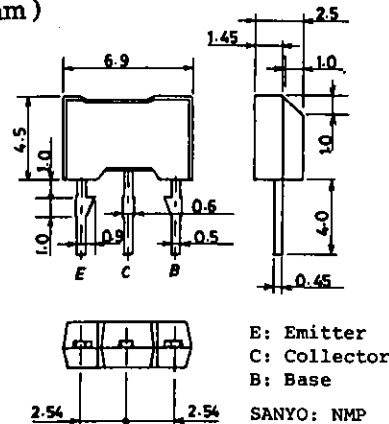


**Es/b Test Circuit**

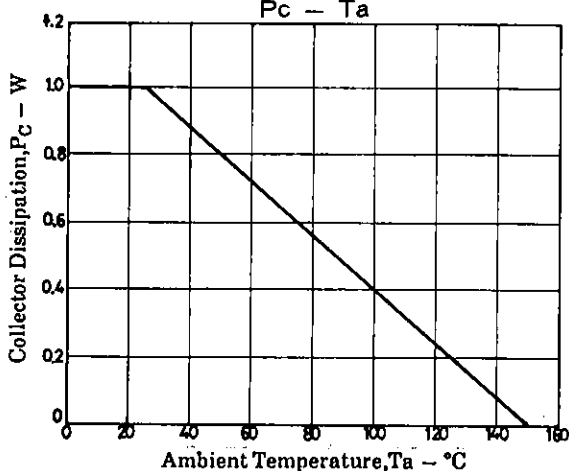
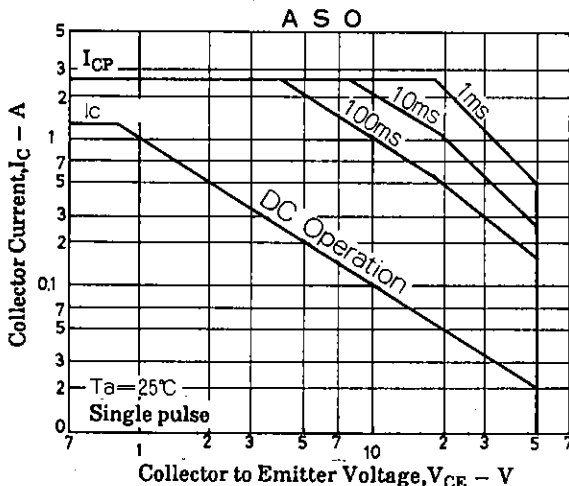
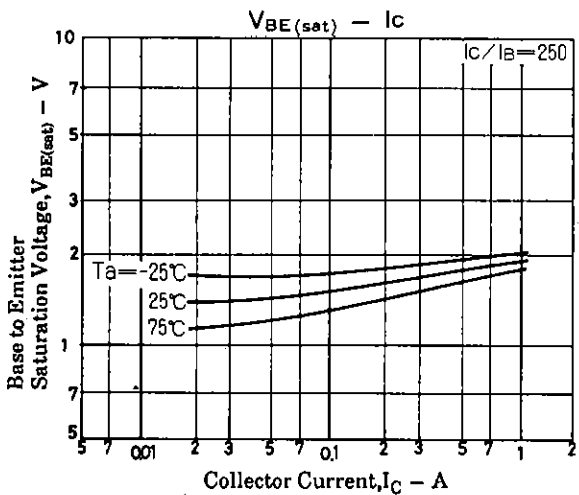
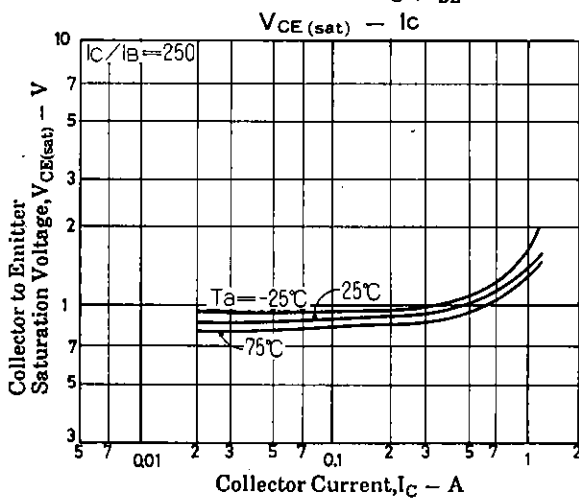
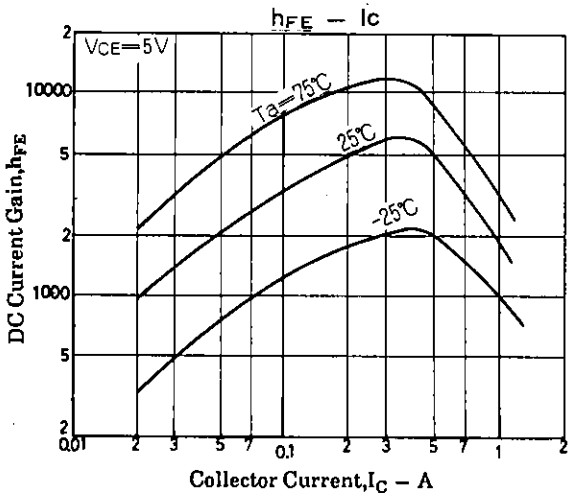
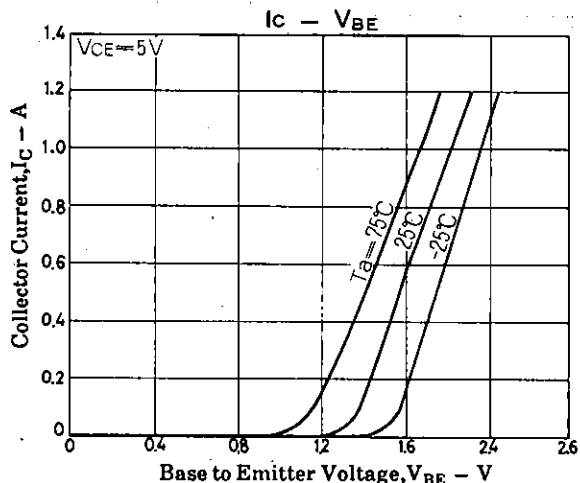
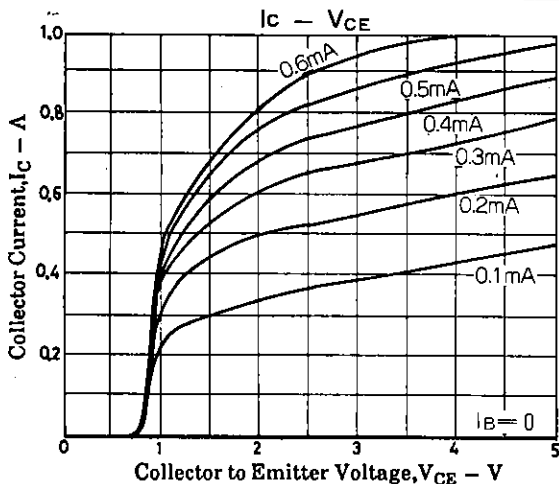


**Package Dimensions 2064**

(unit: mm)



2SC4491



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