



Transistors

ROHM

● TO-92L Types

* New Products ☆ Under Development

Function	Type	V _{CEO} (V)	I _C (A)	P _C (W)	f _T (MHz)	h _{FE}	Package	
Chroma Driver	2SC3269	300	0.1	0.75	100	39~180	TO-92L	Fig. 20
Darlington Driver	*2SB1256	—100	2	1.20	—	1K~10K	TO-92L	Fig. 20
	2SD1809	60	1	0.90	—	2K~	TO-92L	Fig. 20
	*2SD1929	60±10	2	1.20	—	1K~10K	TO-92L	Fig. 20
	*2SD1930	100	2	1.20	—	1K~10K	TO-92L	Fig. 20
High Voltage Switching	☆2SC4166	400	0.1	0.90	20	56~270	TO-92L	Fig. 20

※V_{CEs}

● TO-126, TO-126M Types

* New Products

Function	Type	V _{CEO} (V)	I _C (A)	P _C (W)	f _T (MHz)	h _{FE}	Package	
Driver	2SB889	—80	—0.7	5	100	82~390	TO-126M	Fig. 22
	2SB891	—32	—2	5	100	82~390	TO-126M	Fig. 22
	2SB1007	—80	—0.7	10	100	82~390	TO-126	Fig. 21
	2SB1009	—32	—2	10	100	82~390	TO-126	Fig. 21
	2SB1065	—50	—3	10	70	56~390	TO-126	Fig. 21
	2SB1086	—120	—1.5	10	50	56~390	TO-126	Fig. 21
	2SB1086A	—160	—1.5	10	50	56~270	TO-126	Fig. 21
	2SD1189	32	2	5	100	82~390	TO-126M	Fig. 22
	2SD1200	80	0.7	5	120	82~390	TO-126M	Fig. 22
	2SD1378	80	0.7	10	120	82~390	TO-126	Fig. 21
	2SD1380	32	2	10	100	82~390	TO-126	Fig. 21
	2SD1381	80	1(I _{CM2})	5	100	82~390	TO-126M	Fig. 22
	2SD1382	80	1(I _{CM2})	10	100	82~390	TO-126	Fig. 21
	2SD1506	50	3	10	90	56~390	TO-126	Fig. 21
	2SD1563	120	1.5	10	80	56~390	TO-126	Fig. 21
	2SD1563A	160	1.5	10	80	56~270	TO-126	Fig. 21
	2SC3271	300	0.1	5	100	39~180	TO-126M	Fig. 22
	2SC3272	300	0.1	10	100	39~180	TO-126	Fig. 21
Chroma Driver	2SB786	—40**	—2	5	150	1K~	TO-126M	Fig. 22
Darlington Driver	2SB1008	—40**	—2	10	150	1K~	TO-126	Fig. 21
	*2SB1272	—100	—2	10	—	1K~10K	TO-126	Fig. 21
	2SD947	40**	2	5	150	4K~	TO-126M	Fig. 22
	2SD1379	40**	2	10	150	4K~	TO-126	Fig. 21
	2SD1637	60±10	2	10	—	1K~10K	TO-126	Fig. 21
	2SD1638	100	2	10	—	1K~10K	TO-126	Fig. 21

※※V_{CEr}

● MRT Type (New Products)

Function	Type	V _{CEO} (V)	I _C (A)	P _C (W)	f _T (MHz)	h _{FE}	Package	
Driver	2SB1328	—160	—1.5	1.2	50	56~270	MRT	Fig. 23
	2SB1329	—32	—1(I _{CM2})	1.2	100	82~390	MRT	Fig. 23
	2SB1330	—80	—0.7	1.2	100	82~390	MRT	Fig. 23
	2SB1331	—32	—2(I _{CM3})	1.2	100	82~390	MRT	Fig. 23
	2SB1332	—80	—1	1.2	100	82~390	MRT	Fig. 23
	2SD2004	160	1.5	1.2	80	56~270	MRT	Fig. 23
	2SD2005	32	1(I _{CM2})	1.2	150	82~390	MRT	Fig. 23
	2SD2006	80	0.7(I _{CM1})	1.2	120	82~390	MRT	Fig. 23
	2SD2008	80	1(I _{CM2})	1.2	100	82~390	MRT	Fig. 23
	2SD2007	32	2(I _{CM2.5})	1.2	100	82~390	MRT	Fig. 23
Chroma Driver	2SC4243	300	0.1	1.2	100	39~180	MRT	Fig. 23
Darlington Driver	2SB1333	—100	2	1.2	—	1K~10K	MRT	Fig. 23
	2SD2009	60*	1	1.2	—	2K~	MRT	Fig. 23
	2SD2010	60±10	2	1.2	—	1K~10K	MRT	Fig. 23
	2SD2011	100	2	1.2	—	1K~10K	MRT	Fig. 23

※V_{CEs}

● TO-220, TO-220FP Types

* New Products ☆ Under Development

Function	Type	V _{CEO} (V)	I _C (A)	P _C (W)	f _T (MHz)	h _{FE}	Package	
Driver	*2SB1033	—60	—3	40	12	60~320	TO-220	Fig. 24
	2SB1064	—50	—3	30	70	60~320	TO-220	Fig. 24
	2SB1085	—120	—1.5	20	50	60~320	TO-220	Fig. 24
	2SB1085A	—160	—1.5	20	50	60~200	TO-220	Fig. 24
	2SB1185	—50	—3	25	70	60~320	TO-220FP	Fig. 25
	2SB1186	—120	—1.5	20	50	60~320	TO-220FP	Fig. 25
	2SB1186A	—160	—1.5	20	50	60~200	TO-220FP	Fig. 25
	*2SB1187	—60	—3	30	12	60~320	TO-220FP	Fig. 25
	☆2SB1289	—80	—7	40	12	60~320	TO-220	Fig. 24
	☆2SB1290	—80	—7	30	12	60~320	TO-220FP	Fig. 25
	☆2SB1291	—60	—5	40	12	60~320	TO-220	Fig. 24
	☆2SB1292	—60	—5	30	12	60~320	TO-220FP	Fig. 25

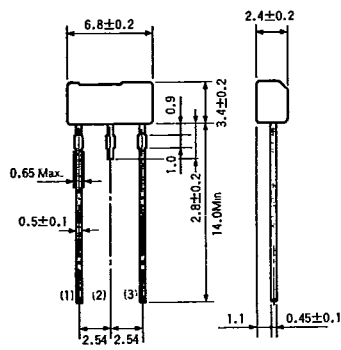


Transistors

ROHM

Dimensions (Unit: mm)

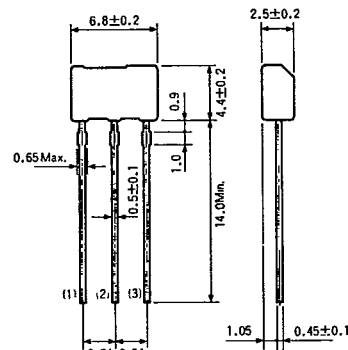
FTL TL4*



(1) Emitter / GND
(2) Collector / OUT
(3) Base / IN

Fig. 13

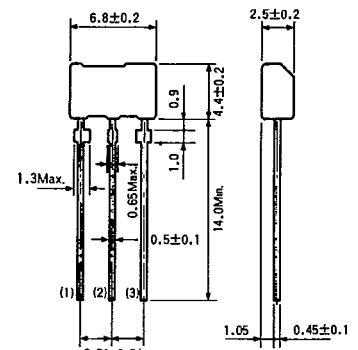
ATV TV2*



(1) Emitter / GND
(2) Collector / OUT
(3) Base / IN

Fig. 14

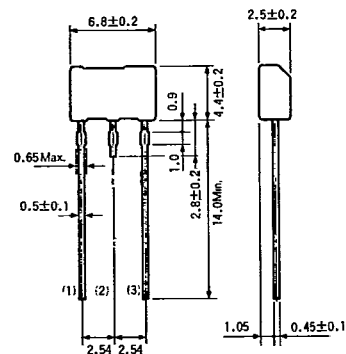
ATV TV3*



(1) Emitter / GND
(2) Collector / OUT
(3) Base / IN

Fig. 15

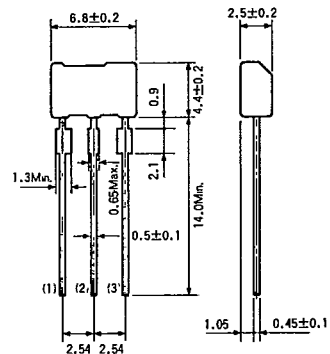
ATV TV4*



(1) Emitter / GND
(2) Collector / OUT
(3) Base / IN

Fig. 16

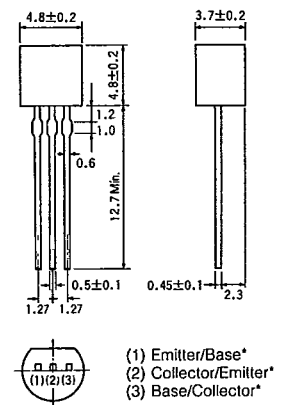
ATV TV6*



(1) Emitter / GND
(2) Collector / OUT
(3) Base / IN

Fig. 17

TO-92

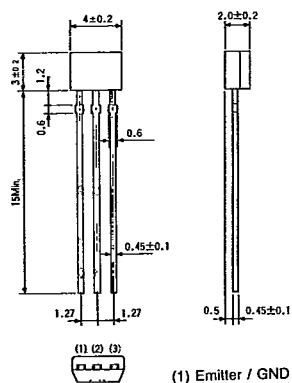


(1) Emitter/Base*
(2) Collector/Emitter*
(3) Base/Collector*

Fig. 18

* Taping specifications can be adjusted for types ATV and FTL. Both types are available in three or four different external dimensions as shown in Figs. 11, 12 and 13 (FTL) and Figs. 14, 15, 16 and 17 (ATV). For taping specifications see packaging forms on the page 113.

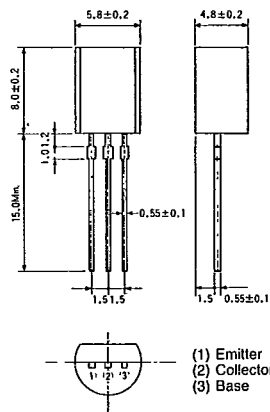
SPT



(1) Emitter / GND
(2) Collector / OUT
(3) Base / IN

Fig. 19

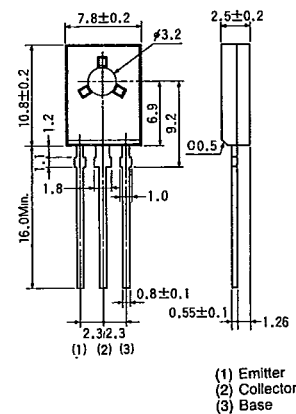
TO-92L



(1) Emitter
(2) Collector
(3) Base

Fig. 20

TO-126



(1) Emitter
(2) Collector
(3) Base

Fig. 21



Dimensions (Unit: mm)

TO-126M

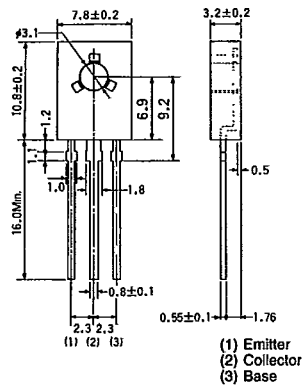


Fig. 22

MRT

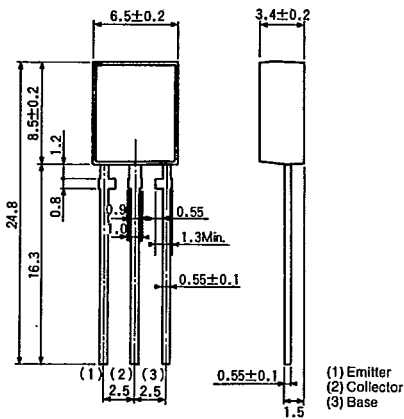
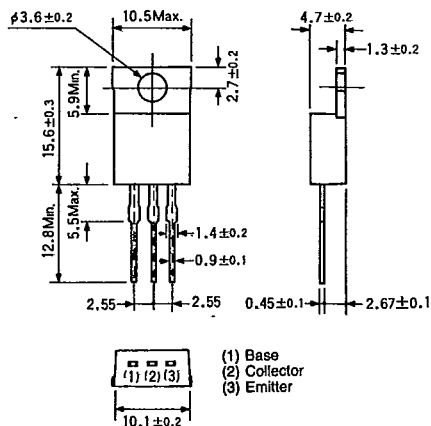


Fig. 23

TO-220



*As of December 1986, these dimensions supercede the previous ones.

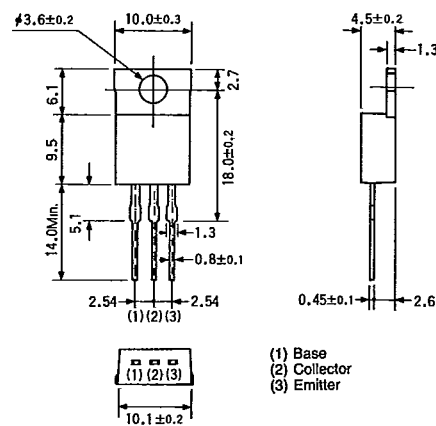


Fig. 24

TO-220FP

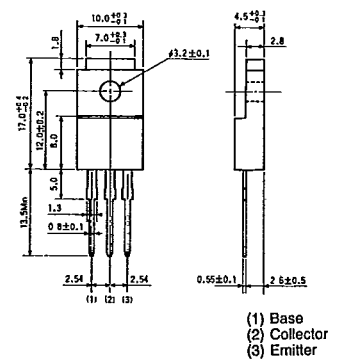


Fig. 25

HRT

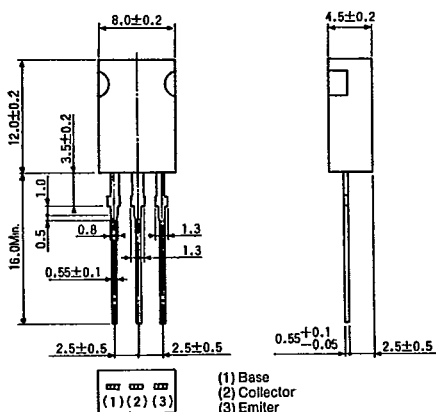


Fig. 26

LF12pin

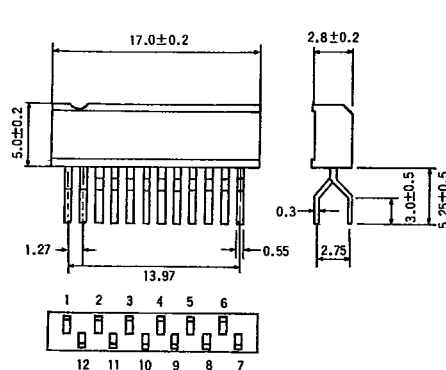


Fig. 27

SIP10pin

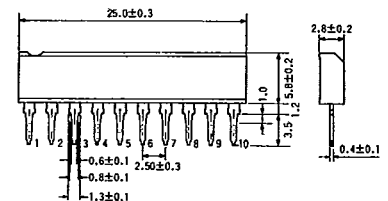


Fig. 28