

SMD DARLINGTON TRANSISTORS

DESCRIPTION

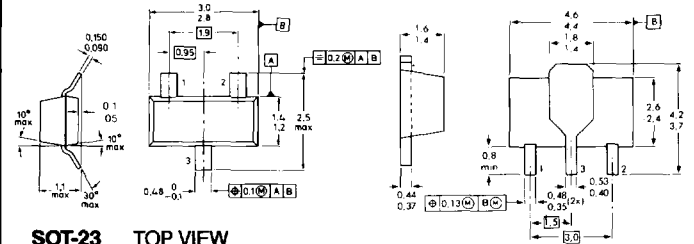
■ Philips Components Darlington transistors provide high input impedance and thus high gain by virtue of two series-integrated transistors on a single chip. High current versions are excellent for industrial switching applications such as driving print hammers, solenoids, relays and lamps. Lower current types are ideal for preamplifier input applications. Darlington transistors are offered in a choice of surface mount packages to address various power requirements, substrates and soldering options available to the designer.

FEATURES

- Gains up to 20,000
- High current types handle up to 90V breakdown and 1.5A surge
- Complementary NPN and PNP devices
- SOT-89 for medium power applications
- SOT-223 for 1W power at 60°C on printed circuit boards

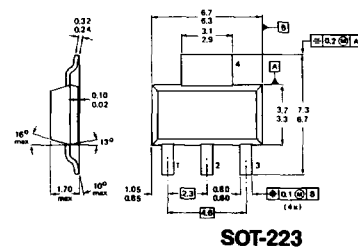
MECHANICAL DATA

(Dimensions in mm)



SOT-23 TOP VIEW

SOT-89 BOTTOM VIEW



SOT-223

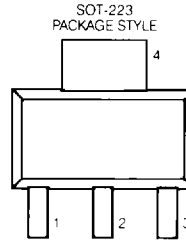
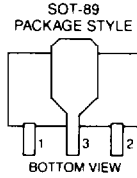
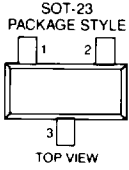
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ELECTRICAL SPECIFICATIONS

TYPE	PACKAGE	RATINGS			hFE		V _{CE(sat)}		f _T	PINOUT
		V _{CEO} V	V _{CBO} V	I _C mA	min./max. at I _C /V _{CE} mA/V		max. at I _C /I _B V mA/mA		typ MHz	
NPN										
PMBTA13	SOT-23	20	30	300	10,000	100/5	1.5	100/0.1	125	F
PZTA13	SOT-223	20	30	300	10,000	100/5	1.5	100/0.1	125	R
PMBTA14	SOT-23	30	30	300	20,000	100/5	1.5	100/0.1	125	F
PXTA14	SOT-89	30	30	300	20,000	100/5	1.5	100/0.1	125	F
PZTA14	SOT-223	30	30	300	20,000	100/5	1.5	100/0.1	125	R
BCV27	SOT-23	30	40	300	20,000	100/5	1.0	100/0.1	100	F
PMBT6427	SOT-23	40	40	500	14,000	500/5	1.5	500/0.5	—	F
BSP50	SOT-223	60	45	500	2,000	500/10	1.3	500/0.5	—	R
BST50	SOT-89	60	45	500	2,000	500/10	1.3	500/0.5	—	F
BST51	SOT-89	80	60	500	2,000	500/1	1.3	500/0.5	—	F
BSP52	SOT-223	90	80	500	2,000	500/5	1.3	500/0.5	—	R
BST52	SOT-89	90	80	500	2,000	500/5	1.3	500/0.5	—	F
PNP										
PMBTA63	SOT-23	30	30	300	10,000	100/5	1.5	100/0.1	125	F
PMBTA64	SOT-23	30	30	300	20,000	100/5	1.5	100/0.1	125	F
PXTA64	SOT-89	30	30	300	20,000	100/5	1.5	100/0.1	125	F
PZTA63	SOT-223	30	30	300	10,000	100/5	1.5	100/0.1	125	R
PZTA64	SOT-223	30	30	300	20,000	100/5	1.5	100/0.1	125	R
BCV26	SOT-23	30	40	300	20,000	100/5	1.0	100/0.1	100	F
BSP60	SOT-223	60	45	500	2,000	500/10	1.3	500/0.5	—	R
BST60	SOT-89	60	45	500	2,000	500/10	1.3	500/0.5	—	F
BSP61	SOT-223	80	60	500	2,000	500/10	1.3	500/0.5	—	R
BST61	SOT-89	80	60	500	2,000	500/10	1.3	500/0.5	—	F
BSP62	SOT-223	90	80	500	2,000	500/10	1.3	500/0.5	—	R
BST62	SOT-89	90	80	500	2,000	500/10	1.3	500/0.5	—	F

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PINOUT DIAGRAMS



PINOUT F: SOT-23
PINOUT F: SOT-89
PINOUT R: SOT-223

PIN 1	PIN 2	PIN 3	PIN 4
E	B	C	—
E	B	C	—
B	C	E	C

MARKING CODES

Type No.	Code	Type No.	Code	Type No.	Code	Type No.	Code
BCV26	FD	BSP62	*	BST62	BS3	PXTA14	1N
BCV27	FF	BST50	AS1	PMBT6427	1V	PXTA64	2V
BSP50	*	BST51	AS2	PMBTA13	1M	PZTA13	*
BSP52	*	BST52	AS3	PMBTA14	1N	PZTA14	*
BSP60	*	BST60	BS1	PMBTA63	2U	PZTA63	*
BSP61	*	BST61	BS2	PMBTA64	2V	PZTA64	*

*See individual device data sheet

TAPE AND REEL SPECIFICATIONS

(Dimensions in mm)

SM Package	Devices per reel	Reel Size (in)	Tape Width (mm)	Ordering Suffix
SOT-23	3K	7	8	TRL
	10K	13	8	TRL 13
SOT-89	1K	7	12	TRL
	4K	13	12	TRL 13
SOT-223	1K	7	12	TRL
	4K	13	12	TRL 13

