

**Video and Auto Ignition Transistors**

Video Transistors and Auto Ignition Transistors fill in the application gaps between the high voltage, high speed, low gain switches and the more conventional low voltage, high gain transistors and ICs.

TELEFUNKEN electronic NPN and PNP video transistors are essentially 300 volt, low  $c_{12}$ , high  $f_t$  high gain devices designed as video amplifier and picture tube drivers. Their value as all-around utility-transistors is obvious.

Automotive ignition transistors are a special class of high voltage switch. To provide the electrically and mechanically tough devices needed for the worst-case under-the-hood conditions, device design emphasis is on slow switching, high gain and extended safe-operating area. They are hence well suited for many quasi high voltage industrial applications such as motor amplifiers, solenoid and power relay drivers or wherever you need inductive-transient-resistant switching devices.

**Video-Transistors**

Type		Electrical characteristics												Case: Dimensions see page 8
		$P_{tot}$ at $T_{case}$ W	$T_{case}$ °C	$I_C$ mA	$V_{CEO}$ V	$V_{CES}$ V	$h_{FE}$ at $I_C$ and $V_{CE}$		$f_T$ at $I_C$		$C_{0raL}$ at $V_{CB}$ and $f$			
							mA	V	MHz	mA	pF	V	MHz	
BF 420	NPN	0.83	25	25	300	—	≥50	25	20	≥60	10	≤1.6	30	0.5
BF 421	PNP	0.83	25	25	300	—	≥50	25	20	≥60	10	≤1.6	30	0.5
BF 422	NPN	0.83	25	25	250	—	≥50	25	20	≥60	10	≤1.6	30	0.5
BF 423	PNP	0.83	25	25	250	—	≥50	25	20	≥60	10	≤1.6	30	0.5
BF 469	NPN	2	110	30	250	—	≥50	25	20	≥60	10	≤1.8	30	0.5
BF 470	PNP	2	110	30	250	—	≥50	25	20	≥60	10	≤1.8	30	0.5
BF 471	NPN	2	110	30	—	300	≥50	25	20	≥60	10	≤1.8	30	0.5
BF 472	PNP	2	110	30	—	300	≥50	25	20	≥60	10	≤1.8	30	0.5
BF 869	NPN	5	25	50	250	—	≥50	25	20	≥60	10	≤1.8	30	1
BF 870	PNP	5	25	50	250	—	≥50	25	20	≥60	10	≤1.8	30	1
BF 871	NPN	5	25	50	—	300	≥50	25	20	≥60	10	≤1.8	30	1
BF 872	PNP	5	25	50	—	300	≥50	25	20	≥60	10	≤1.8	30	1
S 671 T	NPN	7	25	50	275	—	≥50	25	20	≥60	10	≤1.8	30	1
S 673 T	NPN	7	25	50	—	350	≥50	25	20	≥60	10	≤1.8	30	1

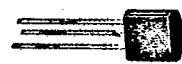


Fig. 1



Fig. 3



Fig. 2, 4

**NPN-Auto Ignition and Special Applications Transistors**

Type	Maximum ratings				Characteristics								Case: Dimensions see page 8
	$P_{tot}$ at $T_{case}$ W	$T_{case}$ °C	$I_C$ A	$V_{CEO}$ V	$t_f$ at $I_C$		$h_{FE}$ at $I_C$ and $V_{CE}$			$V_{CEsat}$ at $I_C$ and $h_{FE}$			
					μs	A	A	V	V	A	A		
BUX 30 <sup>1)</sup>	90	≤25	10	400	2	5	≥150	5	3	≤3	10	25	
BUX 30 AV <sup>1)</sup>	90	≤25	10	350 <sup>2)</sup>	3	5	250	5	3	≤3	10	50	
BUX 37 <sup>1)</sup>	50	≤100	15	400	—	—	≥100	7	1.5	≤2	10	6.66	
BUY 50	95	≤45	15	250 <sup>3)</sup>	≤1	5	≥20	2	2	≤1.5	15	3	
S 637 T	140	≤25	15	400	—	—	≥100	7	1.5	2	10	6.66	
S 601 T	100	≤55	15	400	—	—	≥100	7	1.5	≤2	10	6.66	
BUY 30 <sup>1)</sup>	40	≤25	8	400	—	—	≥350	3	4	≤4	4	100	

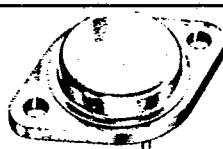


Fig. 6



Fig. 8

Chip dimensions: Fig. 7



Fig. 5

Remarks: <sup>1)</sup> Darlingtontransistor; <sup>2)</sup>  $E_L \geq 270$  mWs,  $I_C = 10$  A; <sup>3)</sup>  $E_L \leq 150$  mWs,  $R_{BE} = 2$  kΩ,  $I_C = 5$  A



Package dimensions for Transistors

All dimensions in mm

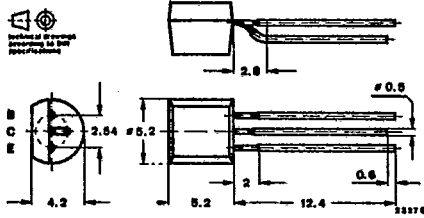


Fig. 1: 10A3 DIN 41868  
JEDEC TO 92 Z  
Weight max. 0.2 g

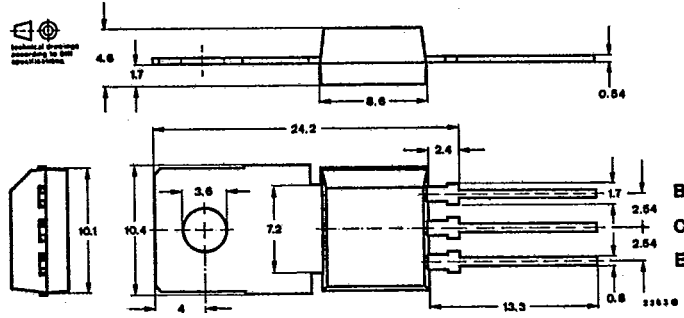


Fig. 2: 34A3 DIN 41869  
JEDEC TO 202  
Weight max. 1.8 g

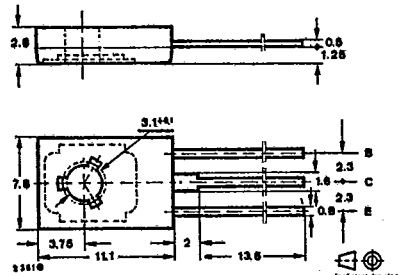


Fig. 3: 12A3 DIN 41869  
JEDEC TO 125 (SOT 32)  
Weight max. 0.8 g

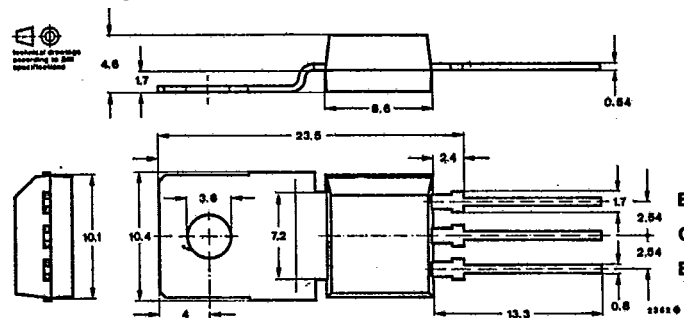


Fig. 4: 34A3 DIN 41869  
JEDEC TO 202  
Weight max. 1.8 g

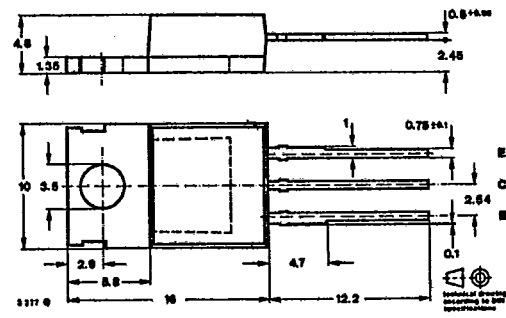


Fig. 5: 14A3 DIN 41869  
JEDEC TO 220  
Weight max. 2.5 g

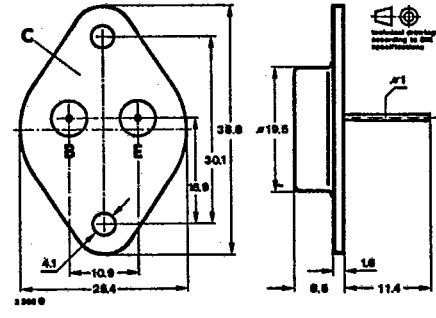


Fig. 6: 3B2 DIN 41872  
JEDEC TO 3  
Weight max. 20 g

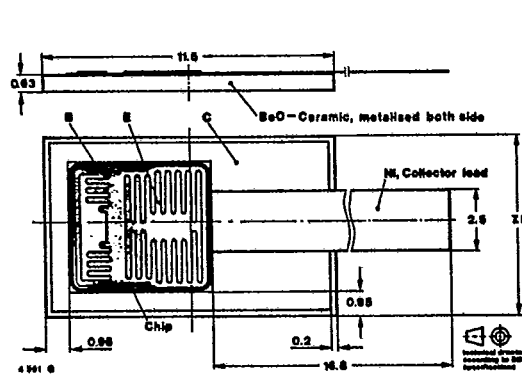


Fig. 7: Chip

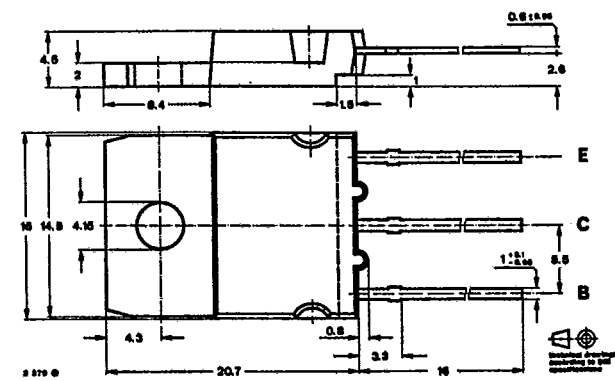


Fig. 8: 14A3 DIN 41869  
JEDEC TO 220  
Weight max. 2.5 g

