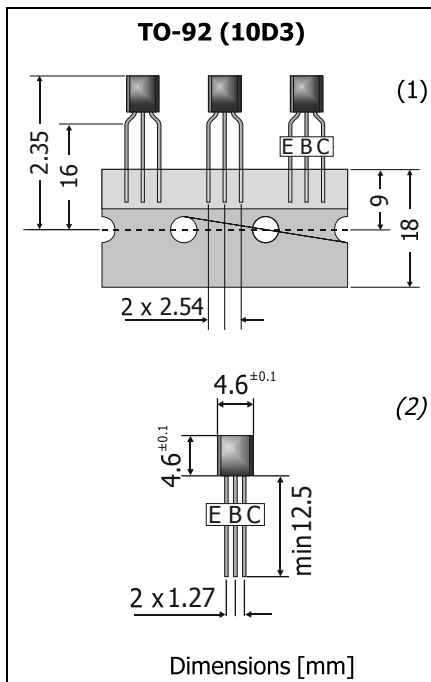


## General Purpose NPN Transistors

$I_C = 500 \text{ mA}$   
 $h_{FE} > 100$   
 $T_{jmax} = 150^\circ\text{C}$

$V_{CE0} = 80 \text{ V}$   
 $P_{tot} = 625 \text{ mW}$



### Typical Applications

Signal processing,  
 Switching, Amplification  
 Commercial grade

### Features

General Purpose  
 Two raster versions  
 Compliant to RoHS, REACH,  
 Conflict Minerals

### Mechanical Data " /

(1) Taped in ammo pack (Raster 2.54)	4000
(2) On request: in bulk (Raster 1.27, suffix "BK")	5000
Weight approx.	0.18 g
Case material	UL 94V-0
Solder & assembly conditions	260°C/10s
	MSL N/A

<b>Recommended complementary PNP transistors</b>	MPSA56
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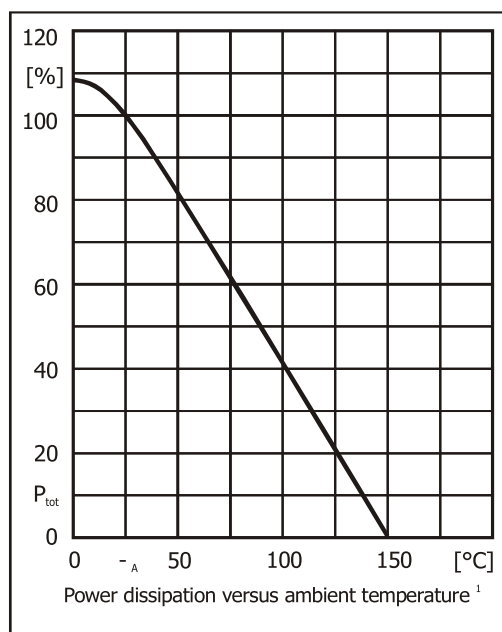
### Maximum ratings<sup>2</sup>

			MPSA06
Collector-Emitter-voltage	B open	$V_{CE0}$	80 V
Collector-Base-voltage	E open	$V_{CBO}$	80 V
Emitter-Base-voltage	C open	$V_{EBO}$	4 V
Power dissipation		$P_{tot}$	625 mW <sup>3</sup>
Collector current	DC	$I_C$	500 mA
Peak Collector current		$I_{CM}$	1 A
Junction temperature		$T_j$	-55...+150°C
Storage temperature		$T_s$	-55...+150°C

<sup>1</sup>  $T_A = 25^\circ\text{C}$ , unless otherwise specified  
 Valid, if leads are kept at ambient temperature at a distance of 2 mm from case

## Characteristics

		$T_j = 25^\circ\text{C}$	Min.	Typ.	Max.
DC current gain					
$I_C = 10\text{ mA}, V_{CE} = 1\text{ V}$	$H_{FE}$		100	-	-
$I_C = 100\text{ mA}, V_{CE} = 1\text{ V}$			100	-	-
Collector-Emitter saturation voltage					
$I_C = 100\text{ mA}, I_B = 10\text{ mA}$	$V_{CEsat}$		-	-	0.25 V
Base-Emitter voltage					
$I_C = 100\text{ mA}, V_{CE} = 1\text{ V}$	$V_{BE}$		-	-	1.2 V
Collector-Base cutoff current					
$V_{CB} = 80\text{ V}, (E\text{ open})$	$I_{CBO}$		-	-	100 nA
Emitter-Base cutoff current					
$V_{EB} = 4\text{ V}, (C\text{ open})$	$I_{EBO}$		-	-	100 nA
Gain-Bandwidth Product					
$I_C = 10\text{ mA}, V_{CE} = 2\text{ V}, f = 100\text{ MHz}$	$f_T$		100 MHz	-	-
Thermal resistance junction to ambient	$R_{thA}$				$< 200\text{ K/W}^2$



<sup>1</sup> Tested with pulses  $t_p = 300\ \mu\text{s}$ , duty cycle  $\leq 2\%$

<sup>2</sup> Valid, if leads are kept at ambient temperature at a distance of 2 mm from case