

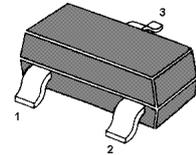
## NPN Silicon Epitaxial Planar Transistors

for general purpose applications, darlington transistor.

The transistor is subdivided into one group according to its DC current gain.

On special request, these transistors can be manufactured in different pin configurations.

MARKING: K3D



1.Base 2.Emitter 3.Collector  
SOT-23 Plastic Package

### Absolute Maximum Ratings ( $T_a=25\text{ }^\circ\text{C}$ )

	Symbol	Value	Unit
Collector Emitter Voltage	$V_{CES}$	30	V
Collector Base Voltage	$V_{CBO}$	30	V
Emitter Base Voltage	$V_{EBO}$	10	V
Collector Current	$I_C$	500	mA
Power Dissipation	$P_{tot}$	200	mW
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_s$	-55 to +150	$^\circ\text{C}$

**Characteristics at  $T_{amb}=25\text{ }^{\circ}\text{C}$** 

	Symbol	Min.	Max.	Unit
DC Current Gain				
at $V_{CE}=5\text{V}$ , $I_C=10\text{mA}$	$h_{FE}$	10000	-	-
at $V_{CE}=5\text{V}$ , $I_C=100\text{mA}$	$h_{FE}$	20000	-	-
Collector Emitter Breakdown Voltage				
at $I_C=100\mu\text{A}$	$V_{(BR)CES}$	30	-	V
Collector Cutoff Current				
at $V_{CB}=30\text{V}$	$I_{CBO}$	-	100	nA
Emitter Cutoff Current				
at $V_{EB}=10\text{V}$	$I_{EBO}$	-	100	nA
Collector Emitter Saturation Voltage				
at $I_C=100\text{mA}$ , $I_B=0.1\text{mA}$	$V_{CE(sat)}$	-	1.5	V
Base Emitter On Voltage				
at $I_C=100\text{mA}$ , $V_{CE}=5\text{V}$	$V_{BE(on)}$	-	2	V
Current Gain Bandwidth Product				
at $V_{CE}=5\text{V}$ , $I_C=10\text{mA}$ , $f=100\text{MHz}$	$f_T$	125	-	MHz