




# NPN EPITAXIAL SILICON TRANSISTORS

# WMBTA42

<p><b>High Voltage Transistor</b></p> <ul style="list-style-type: none"> <li>* Die Size 0.6*0.6mm</li> <li>* Power Dissipation: 225mW</li> <li>* Collector Current: Max. 500mA</li> <li>* Bonding Pad Size              Emitoe 100*100mkm              Base 100*100mkm</li> </ul>	<p><b>SOT—23</b></p> 	<p>1. BASE 2. EMITTER 3. COLLECTOR</p>
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## GUARANTEED PROBED CHARACTERISTICS (T<sub>A</sub>=25°C)

Characteristic	Symbol	Test Conditions	Limits			Units
			Min	Typ	Max	
Collector-emitter Breakdown Voltage	V <sub>CEO</sub>	I <sub>C</sub> =1.0mA	300	-	-	V
Collector-Base Breakdown Voltage	V <sub>CBO</sub>	I <sub>C</sub> =100uA	300	-	-	V
Collector Cut-off Current	I <sub>CBO</sub>	V <sub>CB</sub> =260V	-	-	100	nA
Emitter Cut-off Current	I <sub>EBO</sub>	V <sub>EB</sub> =6V	-	-	100	nA
DC Current Gain	h <sub>FE</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =1mA V <sub>CE</sub> =10V, I <sub>C</sub> =10mA V <sub>CE</sub> =10V, I <sub>C</sub> =30mA	30 40 40	-	-	
Base-Emitter Saturation Voltage	V <sub>BEsat</sub>	I <sub>C</sub> =20mA, I <sub>b</sub> =2mA	-	-	0.90	V
Collector-Emitter Saturation Voltage	V <sub>CEsat</sub>	I <sub>C</sub> =20mA, I <sub>B</sub> =2mA	-	-	0.35	V
Transition Frequency	f <sub>T</sub>	V <sub>CE</sub> =20V, I <sub>C</sub> =10mA, f=10MHz	50	-	-	MHz
Collector-Base Capacitance	C <sub>cb</sub>	V <sub>CB</sub> =20V, f=1MHz	-	-	3.0	pF

**NOTES:** Due to probe testing limitations, only the DC parameters are tested.