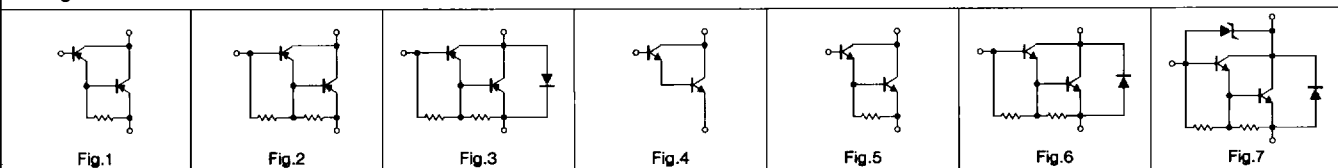


MPT • CPT F5 • PSD

Application	MPT			V <sub>CEO</sub> (V) *V <sub>CE(sat)</sub> **V <sub>CER</sub>	I <sub>c</sub> (A)	I <sub>c</sub> Max. (A)	P <sub>c</sub> (W)		h <sub>FE</sub>	Available h <sub>FE</sub> Ranking code	V <sub>CE</sub> (V)	I <sub>c</sub> (mA)	Circuit	
	MPT	CPT F5	PSD				MPT (Ta=25°C)	CPT (Tc=25°C)						
Driver	2SB1132	-	-	-32	-1	-	2*	-	82~390	P Q R	-3	-100	-	
	2SA1900	-	-	-50	-1	-2	2*	-	82~390	P Q R	-3	-500	-	
	-	2SB1184	-	-50	-3	-	-	15	82~390	P Q R	-3	-500	-	
	2SB1188	2SB1182	-	-32	-2	-	2*	10	82~390	P Q R	-3	-500	-	
	2SB1189	-	-	-80	-0.7	-	2*	-	82~390	P Q R	-3	-100	-	
	2SB1260	2SB1181	-	-80	-1	-	2*	10	82~390	P Q R	-3	-100	-	
	-	2SB1275	-	-160	-1.5	-	-	10	56~270	N P Q	-5	-100	-	
	-	2SB1516	-	-80	-3	-	-	10	56~270	N P Q	-2	-400	-	
	-	2SB1535	-	-100	-6	-	-	10	56~270	N P Q	-1	-550	-	
	2SC4132	-	-	120	2	-	2*	-	56~390	N P Q R	5	100	-	
	2SD1664	-	-	32	1	-	2*	-	82~390	P Q R	3	100	-	
	2SC5053	-	-	50	1	2	2*	-	82~390	P Q R	3	500	-	
	-	2SD1760	-	50	3	-	-	15	82~390	P Q R	3	500	-	
	2SD1766	2SD1758	-	32	2	-	2*	10	82~390	P Q R	3	500	-	
	2SD1767	-	-	80	0.7	-	2*	-	82~390	P Q R	3	100	-	
	2SD1898	2SD1733	-	80	1	-	2*	10	82~390	P Q R	3	500	-	
	2SD2211	2SD1918	-	160	1.5	-	2*	10	56~270	N P Q	5	100	-	
	2SD2167	-	-	31±4	2	3	2*	-	56~270	N P Q	3	500	-	
	Low V <sub>CE(sat)</sub>	2SA1797	-	-	-50	-2	-5	2*	-	82~270	P Q	-2	-500	-
		-	-	☆2SA1870	-60	-12	-	-	35	60~320	D E F	-2	-2000	-
2SB1424		-	-	-20	-3	-5	2*	-	82~390	P Q R	-2	-100	-	
New 2SB1561		-	-	-60	-2	-5	2*	-	82~270	P Q	-2	-500	-	
-		2SA1952	-	-60	-5	-10	-	10	82~270	P Q	-2	-1000	-	
2SC4672		-	-	50	2	5	2*	-	82~270	P Q	2	500	-	
-		-	☆2SC4939	60	12	-	-	35	60~320	D E F	2	2000	-	
-		2SC5103	-	60	5	10	-	10	82~270	P Q	2	1000	-	
2SD2150		-	-	20	3	5	2*	-	120~560	Q R S	2	100	-	
New 2SD2391		-	-	60	2	5	2*	-	82~270	P Q	2	500	-	
Strobe Flash Low V <sub>CE(sat)</sub>	-	New 2SA1834	-	-20	-10	-15	-	10	120~560	Q R S	-2	-500	-	
	2SB1308	-	-	-20	-3	-5	2*	-	82~390	P Q R	-2	-500	-	
	2SB1386	2SB1412	-	-20	-5	-10	2*	10	82~390	P Q R	-2	-500	-	
	-	2SC5001	-	20	10	15	-	10	120~560	Q R S	2	500	-	
	2SD1963	-	-	20	3	5	2*	-	120~560	Q R S	2	500	-	
2SD2098	2SD2118	-	20	5	10	2*	10	120~560	Q R S	2	500	-		
High h <sub>FE</sub>	2SB1427	-	-	-20	-2	-3	2*	-	270~820	S E	-6	-500	-	
	2SD2153	-	-	25	2	3	2*	-	390~2700	E U V W	6	500	-	
	-	2SD2318	-	60	3	4.5	-	15	390~1800	E U V	4	500	-	
Darlington	-	2SB1183	-	-40**	-2	-	-	10	1k~200k	-	-3	-500	Fig.1	
	-	2SB1316	-	-100	-2	-	-	10	1k~10k	-	-2	-1000	Fig.3	
	-	2SB1474	-	-80	-4	-	-	10	1k~10k	-	-3	-2000	Fig.2	
	-	2SD1759	-	40**	2	-	-	10	1k~200k	-	3	500	Fig.5	
	2SD1834	-	-	60*	1	-	2*	-	2k~	-	3	500	Fig.4	
	2SD2195	2SD1980	-	100	2	-	2*	10	1k~10k	-	2	1000	Fig.6	
	2SD2170	-	-	90 <sup>+20</sup> <sub>-10</sub>	2	3	2*	-	1k~10k	-	2	1000	Fig.7	
	2SD2212	2SD2143	-	60±10	2	-	2*	10	1k~10k	-	2	1000	Fig.7	
High Voltage SW	2SA1759	-	-	-400	-0.1	-0.2	2*	-	56~270	N P Q	-10	-10	-	
	2SA1812	2SA1727	-	-400	-0.5	-1	2*	10	56~270	N P Q	-5	-50	-	
	-	2SA1862	-	-400	-2	-4	-	10	56~180	N P	-5	-100	-	
	-	2SA1807	-	-600	-1	-2	-	10	56~180	N P	-5	-100	-	
	2SC4505	-	-	400	0.1	-	2*	-	56~270	N P Q	10	10	-	
	-	☆2SC5161	-	400	2	4	-	10	16~50	A B	5	100	-	
	-	-	2SC4937	400	2	-	-	35	16~50	A B	5	100	-	
	-	-	2SC4938	400	5	-	-	35	16~50	A B	5	3000	-	
	-	-	☆2SC5115	500	5	10	-	35	10~50	-	5	2000	-	
-	-	☆2SC5119	550	4	8	-	35	10~50	-	5	2500	-		
-	☆2SC5162	-	600	1	2	-	10	56~180	N P	5	100	-		

Notes : 1. ☆: Under development 2. F5 denotes surface mount version of CPT (SC-64) 3. ★: Package mounted on ceramic 40×40×0.7mm

Darlington transistor internal circuit



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Land pattern

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The Class and basic rating limits for Standard and Special Standard Products (Units)

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Part Marking

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# Transistors

MPT • CPT F5 • PSD

## ●Product Designation

- When ordering, specify the type.
- Check each code against the tables shown below.
- Fill a space with the next character.

<b>2</b>	<b>S</b>	<b>B</b>	<b>1</b>	<b>1</b>	<b>8</b>	<b>8</b>				<b>T</b>	<b>1</b>	<b>0</b>	<b>0</b>																													
<b>Part No.</b>						<b>Special code</b>						<b>h<sub>FE</sub> Ranking code</b>																														
						<ul style="list-style-type: none"> <li>• Omit for standard product.</li> <li>• Factory assigned for custom product.</li> </ul>						Input h <sub>FE</sub> rank signal display One rank preferred <input checked="" type="checkbox"/> P <input type="checkbox"/> Multiple rank preferred <input checked="" type="checkbox"/> P <input type="checkbox"/> R (Min., Max. is displayed)																														
<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Code</th> <th>h<sub>FE</sub> Range</th> </tr> </thead> <tbody> <tr><td>L</td><td>27~56</td></tr> <tr><td>M</td><td>39~82</td></tr> <tr><td>N</td><td>56~120</td></tr> <tr><td>P</td><td>82~180</td></tr> <tr><td>Q</td><td>120~270</td></tr> <tr><td>R</td><td>180~390</td></tr> <tr><td>S</td><td>270~560</td></tr> <tr><td>E</td><td>390~820</td></tr> <tr><td>U</td><td>560~1200</td></tr> <tr><td>V</td><td>820~1800</td></tr> <tr><td>W</td><td>1200~2700</td></tr> <tr><td colspan="2">Darlington : As indicated</td></tr> </tbody> </table>																	Code	h <sub>FE</sub> Range	L	27~56	M	39~82	N	56~120	P	82~180	Q	120~270	R	180~390	S	270~560	E	390~820	U	560~1200	V	820~1800	W	1200~2700	Darlington : As indicated	
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## ●Packaging

Package	Code	Packaging type	Packaging style	Direction	Quantity/Package (pcs)	Quantity/Unit (pcs)
MPT	T100	Taping	Embossed reel tape	3 Pins side on sprocket hole side	1,000	-
	T101			Fin on sprocket hole side		
CPT F5	TL	Taping	Embossed reel tape	Fin on sprocket hole side	2,500	-
	TR			3 Pins side on sprocket hole side		
	F5	Bulk	Polyethylene bag	-	2,000	200
PSD	TL	Taping	Embossed reel tape	Fin on sprocket hole side	1,000	-
	TR			3 Pins side on sprocket hole side		
	None	Bulk	Polyethylene bag	-	500	100

(Unit : mm)

Package	MPT (SOT-89)	CPT F5	PSD
Dimensions	<p>(1) Base (2) Collector (3) Emitter</p>	<p>(1) Base (2) Collector (3) Emitter</p>	<p>(1) Base (2) Collector (3) Emitter</p>
Actual size			
External dimensions (×1.0)			

●Packaging Specifications

(Unit : mm)

Reel	Tape
<p><b>MPT (SOT-89)</b></p>	
<p><b>CPT F5 (D PAK)</b></p>	
<p><b>PSD (D<sup>2</sup> PAK)</b></p>	

Transistors

TRANSISTORS

Land pattern

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The Case and Lead outline  
Match for Standard and Special  
Product Products Units

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