



1. Product profile

1.1 Description

N-channel enhancement mode field-effect transistor in a plastic package using TrenchMOS™ technology.

1.2 Features

- TrenchMOS™ technology
- Very fast switching
- Low threshold voltage
- Surface mounted package.

1.3 Applications

- Battery powered motor control
- High-speed switch in set top box power supplies
- Load switch in notebook computers
- Driver FET in DC-to-DC converters.

1.4 Quick reference data

- $V_{DS} \leq 20\text{ V}$
- $P_{tot} \leq 1.75\text{ W}$
- $I_D \leq 6.3\text{ A}$
- $R_{DSon} \leq 28\text{ m}\Omega$.

2. Pinning information

Table 1: Pinning - SOT457 (TSOP6), simplified outline and symbol

Pin	Description	Simplified outline	Symbol
1,2,5,6	drain (d)	<p>Top view MBK092</p>	<p>mbb076</p>
3	gate (g)		
4	source (s)		

SOT457 (TSOP6)

3. Ordering information

Table 2: Ordering information

Type number	Package		Version
	Name	Description	
PMN23UN	TSOP6	Plastic surface mounted package; 6 leads	SOT457

4. Limiting values

Table 3: Limiting values

In accordance with the Absolute Maximum Rating System (IEC 60134).

Symbol	Parameter	Conditions	Min	Max	Unit
V_{DS}	drain-source voltage (DC)	$25\text{ °C} \leq T_j \leq 150\text{ °C}$	-	20	V
V_{GS}	gate-source voltage (DC)		-	± 8	V
I_D	drain current (DC)	$T_{sp} = 25\text{ °C}; V_{GS} = 4.5\text{ V};$ Figure 2 and 3	-	6.3	A
		$T_{sp} = 70\text{ °C}; V_{GS} = 4.5\text{ V};$ Figure 2	-	5	A
I_{DM}	peak drain current	$T_{sp} = 25\text{ °C};$ pulsed; $t_p \leq 10\text{ }\mu\text{s};$ Figure 3	-	25.2	A
P_{tot}	total power dissipation	$T_{sp} = 25\text{ °C};$ Figure 1	-	1.75	W
T_{stg}	storage temperature		-55	+150	°C
T_j	junction temperature		-55	+150	°C

Source-drain diode

I_S	source (diode forward) current (DC)	$T_{sp} = 25\text{ °C}$	-	1.45	A
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