



MOT

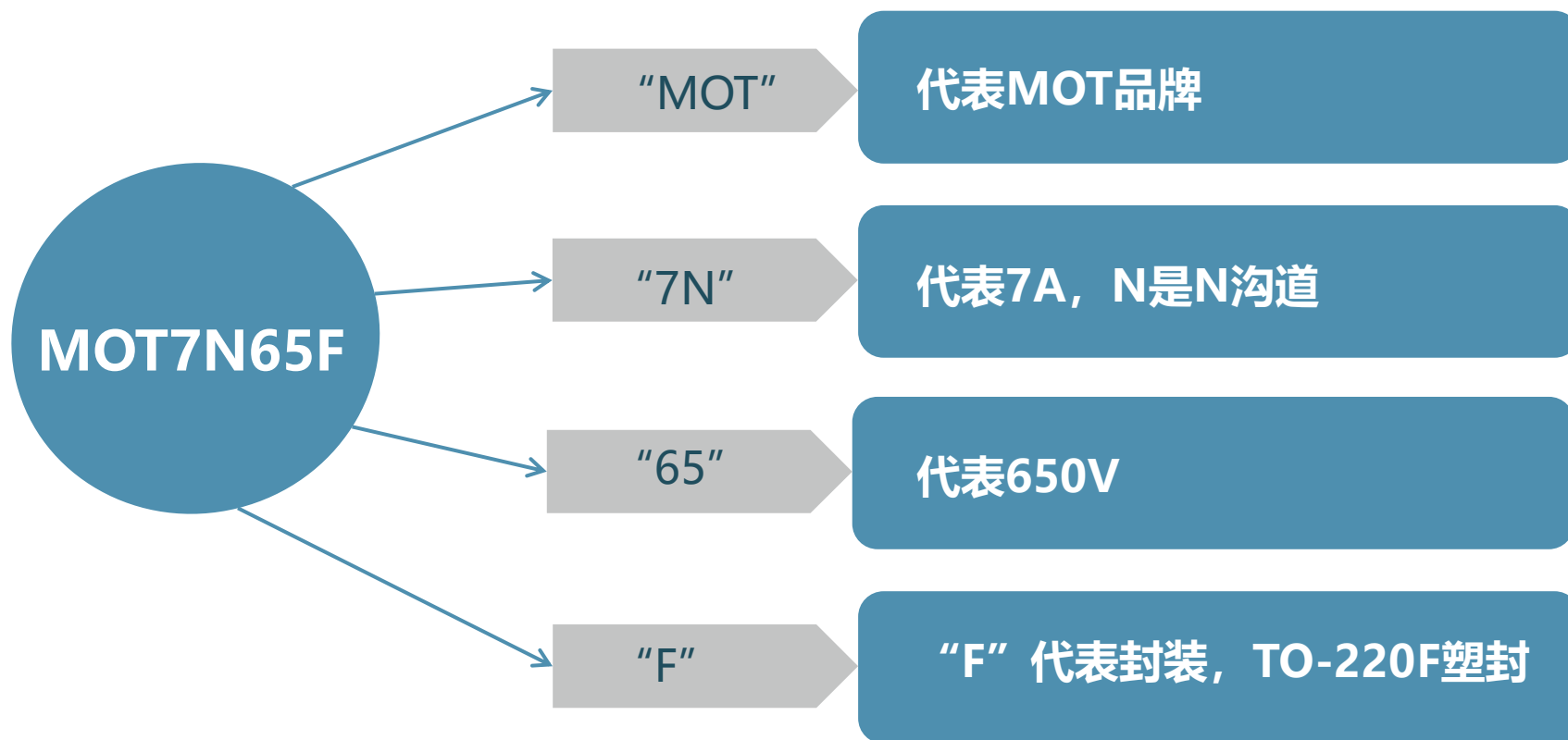
产品命名

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## 高压MOS —— 型号讲解

丝印为MOT7N65F



## ■ PRODUCT CHARACTERISTICS

VDSS	650V
$R_{DS(on)}$ typ.(@ $V_{GS} = 10\text{ V}$ )	0.8 $\Omega$
Qg@type	44nC
ID	10A

漏源电压 (最大耐压)

Symbol

导通电阻 (内阻)

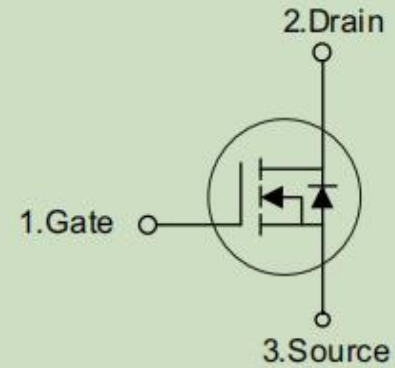
漏源电流 (最大电流)

## ■ APPLICATIONS

- High frequency switching mode power supply
- Electronic ballast
- UPS

## ■ FEATURES

- \* Ultra low gate charge
- \* Fast switching capability
- \* Avalanche energy tested
- \* Improved dv/dt capability, high ruggedness



TO-220



TO-220F

# 高压MOSFET

MOT4N65C尾缀C代表TO-251, 丝印为MOT4N65C

MOT7N65D尾缀D代表TO-252, 丝印为MOT7N65D

MOT10N65F尾缀F代表TO-220F, 丝印为MOT7N65F

MOT20N65W尾缀W代表TO-247, 丝印为MOT20N65W

MOT20N65P尾缀P代表TO-3P, 丝印为MOT20N65P

高压MOS管主要有

按电流:

2N、4N、5N、7N、8N、9N、10N、11N、12N、13N、15N、16N、18N、20N...

按耐压:

450V、500V、650V、700V、800V、900V...

# 高压MOSFET

MOT4N65C尾缀C代表  
TO-251, 丝印为

MOT4N65C

MOT10N65F尾缀F代表  
TO-220F, 丝印为

MOT7N65F

MOT20N65P尾缀P代表  
TO-3P, 丝印为

MOT20N65P

按电流:

分为

2N、4N、5N、7N、8N、  
9N、10N、11N、12N、  
13N、15N、16N、18N、  
20N...

MOT7N65D

MOT7N65D尾缀D代表  
TO-252, 丝印为

MOT20N65W

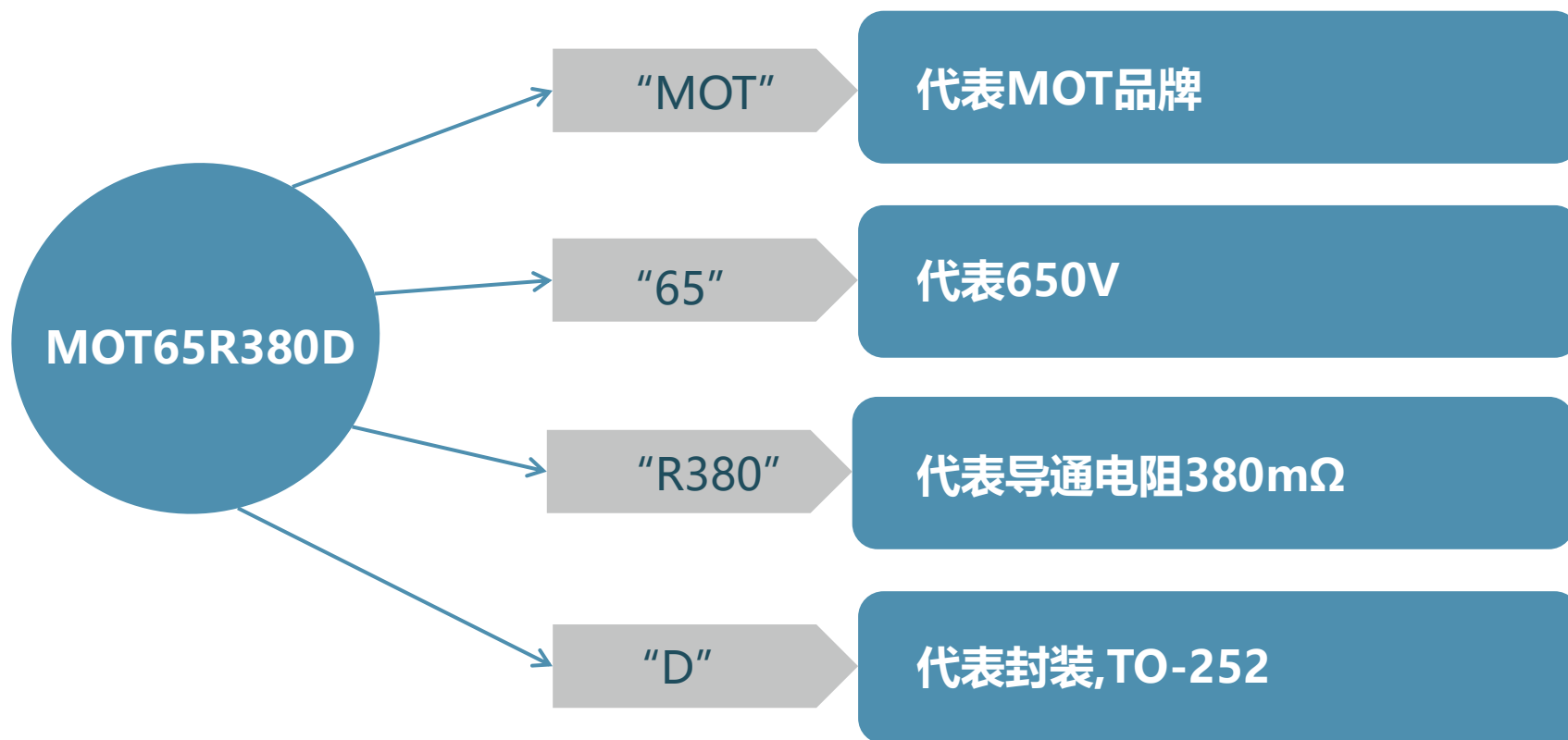
MOT20N65W尾缀W代表  
TO-247, 丝印为

按耐压

450V、500V、650V、  
700V、800V、900V...

## COOL MOS —— 型号讲解

丝印为MOT65R380D



## 中低压 MOS

中低压MOS具有较高的集成度、较低的功耗；较好的性能稳定性、较高的工作温度。

广泛应用于：

消费电子领域，电子烟、电弧打火机、暖手宝、移动电源、电热毯、玩具、美容美发产品等等。

开关电源领域，LED驱动、PD快充、适配器、逆变器等。

电动汽车领域，电池管理系统、电机控制器和车载充电器。

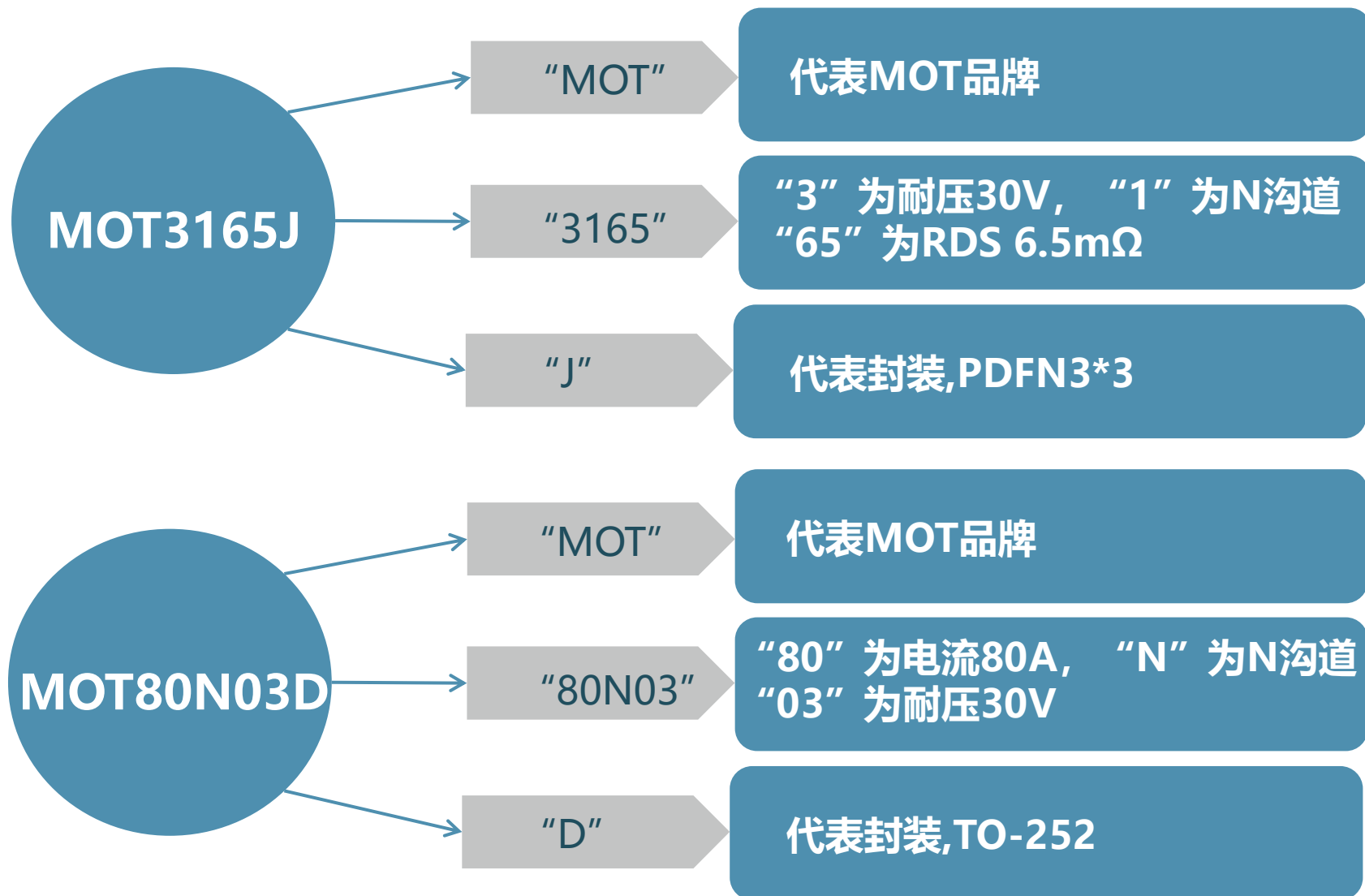
智能家居和物联网领域，智能设备和传感器中，如智能插座、智能灯泡、智能门锁、智能开关等

中低压MOS沟槽晶圆工艺：

Trench：潜沟槽工艺

SGT：深沟槽工艺

## 中低压 MOS —— 型号讲解



# 中低压 MOS--关键参数

## PRODUCT CHARACTERISTICS

VDSS	100V
$R_{DS(on)max}(@V_{GS} = 10\text{ V})$	6.5mΩ
ID	80A

漏源电压 (最大耐压)

Symbol

导通电阻 (内阻)

漏源电流 (最大电流)



Symbol	Parameter		Max.	Units
V <sub>DSS</sub>	Drain-Source Voltage		100	V
V <sub>GSS</sub>	Gate-Source Voltage		± 20	V
I <sub>D</sub>	Continuous Drain Current <small>note5</small>	T <sub>C</sub> = 25°C	80	A
I <sub>D</sub>	Continuous Drain Current <small>note5</small>	T <sub>C</sub> = 100°C	50	A
I <sub>DM</sub>	Pulsed Drain Current <small>note3</small>		320	A
P <sub>D</sub>	Power Dissipation <small>note2</small>	T <sub>C</sub> = 25°C	76	W
I <sub>AS</sub>	Avalanche Current <small>note3,6</small>		21	A
E <sub>AS</sub>	Single Pulse Avalanche Energy <small>note3,6</small>		108	mJ
R <sub>θJC</sub>	Thermal Resistance, Junction to Case		1.65	°C/W
R <sub>θJA</sub>	Thermal Resistance, Junction to Ambient <small>note1,4</small>		55	°C/W
T <sub>J</sub> , T <sub>STG</sub>	Operating and Storage Temperature Range		-55 to +150	°C

漏源最大单脉冲电流

最大耗散功率

单脉冲雪崩能量

On Characteristics						
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS} = V_{GS}, I_D = 250\mu A$	1.2	1.8	2.5	V
$R_{DS(on)}$	Static Drain-Source On-Resistance	$V_{GS} = 10V, I_D = 20A$	-	6.5	7.5	m $\Omega$
		$V_{GS} = 4.5V, I_D = 15A$	-	10	12.5	m $\Omega$
$R_g$	Gate Resistance	$V_{DS} = V_{GS} = 0V, f = 1.0MHz$	-	1.89	-	$\Omega$
Dynamic Characteristics						
$C_{iss}$	Input Capacitance	$V_{DS} = 50V, V_{GS} = 0V,$ $f = 1.0MHz$	-	2362	-	pF
$C_{oss}$	Output Capacitance		-	743	-	pF
$C_{rss}$	Reverse Transfer Capacitance		-	78	-	pF

开启电压

结电容

# 肖特基二极管Schottky--关键参数

## PRODUCT CHARACTERISTICS

$V_R(@I_C=0.5mA)$	200V
$V_F(Typ@I_F=10A)$	0.9V
$I_R(@V_R=200V)$	20 $\mu$ A
$I_D$	20A

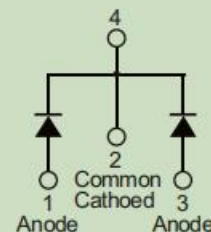
反向电压

正向压降

反向饱和漏电流

最大正向电流

Symbol

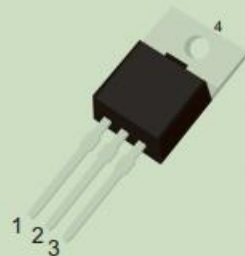


## MECHANICAL CHARACTERISTICS

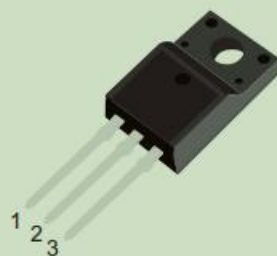
- \* Case: Epoxy, Molded
- \* Finish: All External Surfaces Corrosion Resistant and Terminal
- \* Leads are Readily Solderable
- \* Lead Temperature for Soldering Purposes:  
260 °C Max. for 10 Seconds

## FEATURES

- \* Guard Ring for Stress Protection
- \* Low Forward Voltage
- \* Low Power Loss/High Efficiency
- \* High Surge Capacity
- \* Low Stored Charge Majority Carrier Conduction
- \* Pb Free Packages are Available\*



TO-220



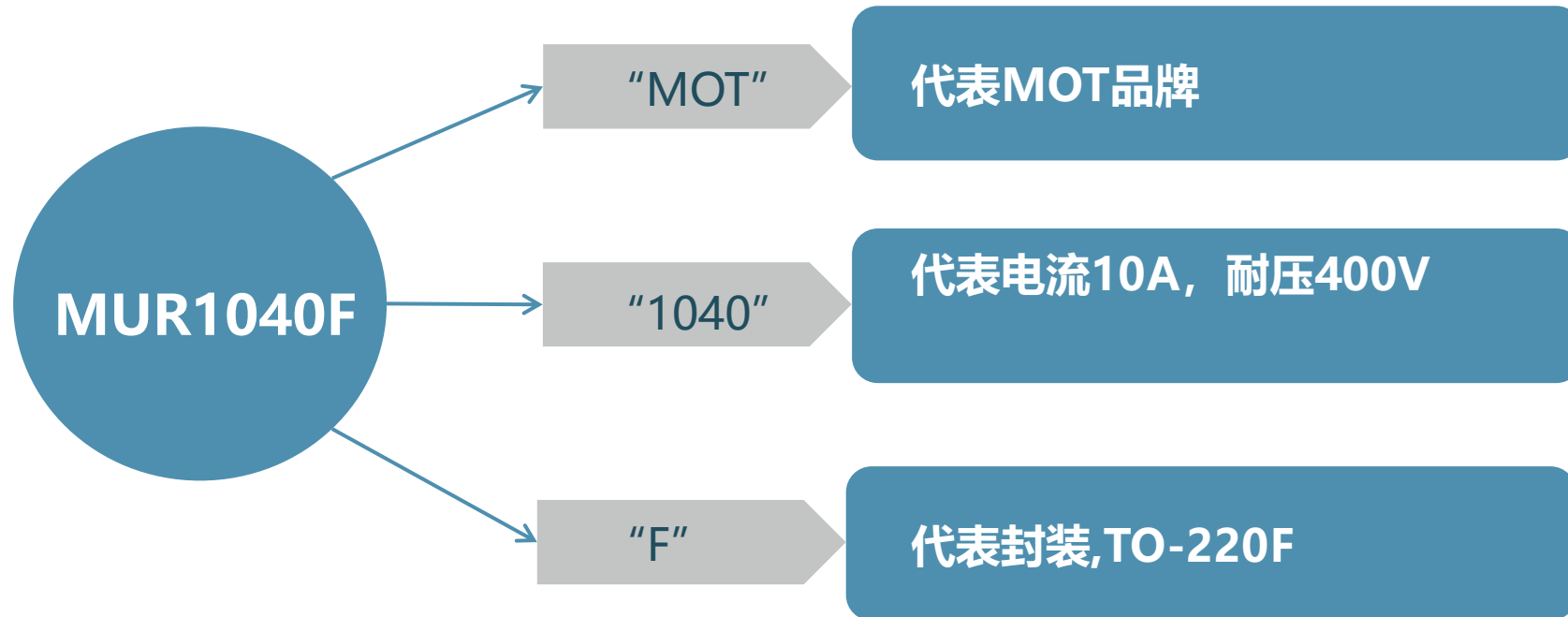
TO-220F



TO-263

## 超快恢复 —— 型号讲解

丝印为MUR1040F



# 整流二极管（超快恢复）--关键参数

## PRODUCT CHARACTERISTICS

VR(@IC=0.5mA)	400V
VF(Typ@IF=10A)	1.4V
IR(@VR=400V)	10uA
ID	20A
TRR	35nS

峰值反向电压

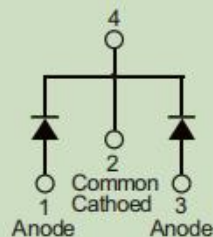
正向压降

最大反向峰值电流

平均整流电流

反向恢复时间

Symbol



## MECHANICAL CHARACTERISTICS

- \* Case: Epoxy, Molded
- \* Finish: All External Surfaces Corrosion Resistant and Terminal
- \* Leads are Readily Solderable
- \* Lead Temperature for Soldering Purposes:  
260 °C Max. for 10 Seconds

## FEATURES

- \* Guard Ring for Stress Protection
- \* Low Forward Voltage
- \* Low Power Loss/High Efficiency
- \* High Surge Capacity
- \* Low Stored Charge Majority Carrier Conduction



TO-220



TO-220F



TO-263